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Phase II
Volume VI
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BIG RALLY II COMMUNICATION SYSTEM
TEST DATA
PHASE II
VOLUME VI

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FEDERAL ELECTRIC CORPORATION

an associate of

INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

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**FEDERAL ELECTRIC CORPORATION
BIG RALLY II COMMUNICATION SYSTEM**

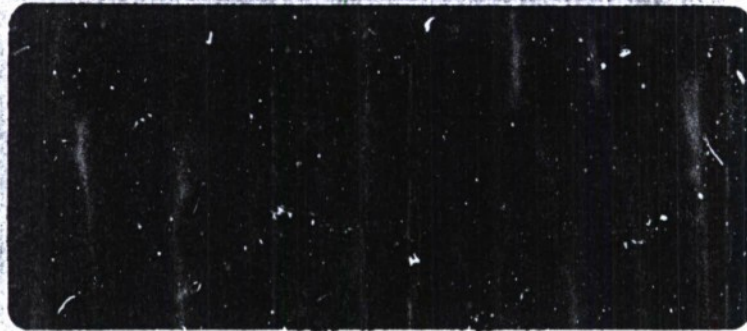
TEST DATA

PHASE II

VOLUME VI

ESD-TDR 64-451

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PHASE II
VOLUME VI

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FEDERAL ELECTRIC CORPORATION

BR II/81 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GPA

Transmission Path:

From Station GPAto Station GIM

EXPECTED

ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units 3.5 Units

B. Power Output

Minimum +28 dbm

+28.4 dbm

C. Transmitter RF Frequency

1) Assigned Operating Freq.

8.325 GC

2) Measured Freq. (AFC ON)

+0.005% of
Assigned Freq.8.3232 GC3) ACF PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 Div CW)

Minimum 9

254) AFC PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 DIV CCW)

Minimum 9

*

2. TRANSMITTER "B"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units 3.4 Units

B. Power Output

Minimum +28 dbm

+28.6 dbm

* Will not correct.

FEDERAL ELECTRIC CORPORATION

BR II/81 Rev.

BIG RALLY II PROJECT

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.325GC</u>
2) Measured Freq. (AFC ON)	⁺ 0.005% of Assigned Freq.	<u>8.3316GC</u>
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>15</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>(*)</u>

* Will not correct.

DATE 12 November 1963TESTER W. J. SchenkerSUPERVISOR P. SweeneyQUALITY ASSURANCE W. C. CarrGEEIA Derald A. Holmes

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GPA

Transmission Path:

From Station GPA to Station GTA

EXPECTED

ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units

2.65 Units

B. Power Output

Minimum +28 dbm

+27.8 dbm

C. Transmitter RF Frequency

1) Assigned Operating Freq.

8.380 GC

2) Measured Freq. (AFC ON)

 $\pm 0.005\%$ of
Assigned Freq.8.3816 GC3) ACF PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 Div CW)

Minimum 9

(*)4) AFC PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 DIV CCW)

Minimum 9

(*)

2. TRANSMITTER "B"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units

3.3 Units

B. Power Output



Minimum +28 dbm

+28.0 dbm

* Will not correct completely.

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	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.380</u> GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>8.3813</u> GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	

* Will not correct completely.

DATE 14 November 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

FEDERAL ELECTRIC CORPORATION

BR II/81 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GIMTransmission Path: From Station GIM to Station GPA

	EXPECTED	ACTUAL
1. TRANSMITTER "A"		
A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>#3.3</u> Units
B. Power Output	Minimum +28 dbm	<u>28.7</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.135</u> GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>8.134605</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>
2. TRANSMITTER "B"		
A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.45</u> Units
B. Power Output	Minimum +28 dbm	<u>29.1</u> dbm

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	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.135GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	8.134738GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

DATE 12 November 1963TESTER W. S. GraySUPERVISOR R. AllenQUALITY ASSURANCE J. BonchurGEEIA Ralph L. Kruger

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GTA

Transmission Path:

From Station GTAto Station GPA

EXPECTED

ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units 2.9 Units

B. Power Output

Minimum +28 dbm 29.5 dbm

C. Transmitter RF Frequency

1) Assigned Operating Freq.

8.190 GC

2) Measured Freq. (AFC ON)

 $\pm 0.005\%$ of
Assigned Freq.8.190004 GC3) ACF PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 Div CW)

Minimum 9

104) AFC PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 DIV CCW)

Minimum 9

10

2. TRANSMITTER "B"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units 3.2 Units

B. Power Output

Minimum +28 dbm 29.1 dbm

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DATA SHEET

MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.190 GC</u>
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>8.1902960 GC</u>
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

DATE 14 November 1963TESTER Mr. J. J. G. J.SUPERVISOR J. B. BartlettQUALITY ASSURANCE J. BrucherGEEIA Ralph S. Huger

FEDERAL ELECTRIC CORPORATION

BR II/81 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GHO

Transmission Path:

From Station GHO to Station GAG

EXPECTED

ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.9</u> Units
B. Power Output	Minimum +28 dbm	<u>28.7</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.345</u> GC
2) Measured Freq. (AFC ON)	+0.005% of Assigned Freq.	<u>8.344.76</u> GC 680
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

2. TRANSMITTER "B"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.1</u> Units
B. Power Output	Minimum +28 dbm	<u>29.3</u> dbm

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.385 GC
2) Measured Freq. (AFC ON)	+0.005% of Assigned Freq.	8.385.28 GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

DATE 8 January 1964

TESTER V. Quinn

SUPERVISOR C. Mahlen

QUALITY ASSURANCE M. Orr

GEEIA Ralph S. Kruger

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GHO

Transmission Path:

From Station GHO to Station GPE

	EXPECTED	ACTUAL
1. TRANSMITTER "A"		
A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.0</u> Units
B. Power Output	Minimum +28 dbm	<u>29.4</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.385</u> GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>8.385</u> GC <u>.760</u>
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

2. TRANSMITTER "B"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.4</u> Units
B. Power Output	Minimum +28 dbm	* <u>26.4</u> dbm <u>30.0</u> dbm

* ~~not within specifications.~~

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.345 GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	8.3439 GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

DATE 8 January 1964TESTER J. QuinnSUPERVISOR CarmichaelQUALITY ASSURANCE W. C. J.GEEIA Ralph S. Kruger

FEDERAL ELECTRIC CORPORATION

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MW-503A LOS STATION TEST

STATION GAG

Transmission Path:

From Station GAG to Station GHO

EXPECTED

ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.2</u> Units
B. Power Output	Minimum +28 dbm	<u>28.1</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.155</u> GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>8.155</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

2. TRANSMITTER "B"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.8</u> Units
B. Power Output	Minimum +28 dbm	<u>29.1</u> dbm

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	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.155 GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	8.15432 GC ** 720
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>9</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>9</u>

~~** Does not meet specifications.~~

DATE 9 January 1964

TESTER James Tomlinson

SUPERVISOR Randall C. Packard

QUALITY ASSURANCE William R. King

GEEIA Ralph S. Kruger

APCS _____

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

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MW-503A LOS STATION TEST

STATION GPE

Transmission Path:

From Station GPEto Station GHO

EXPECTED

ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units 3.4 Units

B. Power Output

Minimum +28 dbm 28.9 dbm

C. Transmitter RF Frequency

1) Assigned Operating Freq.

8.195 GC

2) Measured Freq. (AFC ON)

 $\pm 0.005\%$ of
Assigned Freq. $*8.19\pm$ GC
47083) ACF PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 Div CW)

Minimum 9

104) AFC PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 DIV CCW)

Minimum 9

10

2. TRANSMITTER "B"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units 2.9 Units

B. Power Output

Minimum +28 dbm 28.9 dbm* Out of Specs *-7 ok*

FEDERAL ELECTRIC CORPORATION

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.195 GC
2) Measured Freq. (AFC ON)	⁺ 0.005% of Assigned Freq.	* 8.19 4 GC 512
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

~~* Out of Specs~~

DATE 10 Jan 64

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION T.I.D.Transmission Path: From Station T.I.D. to Station T.I.C.

EXPECTED ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.1</u> 37.1 Units
B. Power Output	Minimum +28 dbm	<u>+29.9</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.365</u> GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>8.3654560</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

2. TRANSMITTER "B"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.4</u> Units
B. Power Output	Minimum +28 dbm	<u>+28.7</u> dbm

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.365 GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	8.362200 GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	10
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	10

DATE 28, Nov. 1963TESTER John H. ThielSUPERVISOR R. E. CarterQUALITY ASSURANCE Patricia HuntGEEIA Ralph S. KrugerAFCS Carl W. Rudell

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION TICTransmission Path: From Station TIC to Station T1b

	EXPECTED	ACTUAL
1. TRANSMITTER "A"		
A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.6</u> Units
B. Power Output	Minimum +28 dbm	<u>+28.3</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.175</u> GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>8.1752</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>
2. TRANSMITTER "B"		
A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.6</u> Units
B. Power Output	Minimum +28 dbm	<u>+30.6</u> dbm

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MW-503A LOS STATION TEST

EXPECTED

ACTUAL

C. Transmitter RF Frequency

1) Assigned Operating Freq.

8.175 GC

2) Measured Freq. (AFC ON)

 $\pm 0.005\%$ of
Assigned Freq.8.17504 GC3) AFC PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 DIV CW)

Minimum 9

9.54) AFC PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 DIV CCW)

Minimum 9

10DATE 28 November 1963TESTER [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE [Signature]GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION TKGTransmission Path: From Station TKG to Station TAL

EXPECTED

ACTUAL

TRANSMITTER "A"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.3</u> Units
B. Power Output	Minimum +28 dbm	<u>+29.0</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.305</u> GC
2) Measured Freq. (AFC ON)	⁺ 0.005% of Assigned Freq.	* <u>8.29864</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>9.5</u>

TRANSMITTER "B"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.5</u> Units
B. Power Output	Minimum +28 dbm	<u>+28.5</u> dbm

* OUT OF SPEC.

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.305 GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	8.3048 GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	10
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	10

DATE 12 December 1963

TESTER John H. ThindSUPERVISOR William R. BurdridgeQUALITY ASSURANCE Joseph M. MalinowskiGEEIA Dorothy A. Holmes

FEDERAL ELECTRIC CORPORATION

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MW-503A LOS STATION TEST

STATION TKG

Transmission Path:

From Station TKG to Station TKA

EXPECTED

ACTUAL

TRANSMITTER "A"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.7</u> Units
B. Power Output	Minimum +28 dbm	<u>28.7</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.025</u> GC
2) Measured Freq. (AFC ON)	+0.005% of Assigned Freq.	<u>8.02643</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>9.5</u>

2. TRANSMITTER "B"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.5</u> Units
B. Power Output	Minimum +28 dbm	<u>28.0</u> dbm

Miss Wilks
LA 9 3666

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.345 GC
2) Measured Freq. (AFC ON)	+ 0.005% of Assigned Freq.	8.346 GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	7.5
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	10

DATE 25 OCTOBER 1963TESTER Joe W. T. J.SUPERVISOR William T. DuderidgeQUALITY ASSURANCE Joe MalbowiczGEEIA Ralph S. Thugers

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FEDERAL ELECTRIC CORPORATION

BR II/81 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION TALTransmission Path: From Station TAL to Station TKG

EXPECTED ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.9</u> Units
B. Power Output	Minimum +28 dbm	<u>+29</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>7.795</u> GC
2) Measured Freq. (AFC ON)	+0.005% of Assigned Freq.	<u>7.7924</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DI v CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

2. TRANSMITTER "B"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.6</u> Units
B. Power Output	Minimum +28 dbm	<u>+28.5</u> dbm

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>7.795 GC</u>
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>7.7957 GC</u>
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

DATE 13 DECEMBER, 1963TESTER *James J. The...*SUPERVISOR *Donald E. Miasa*QUALITY ASSURANCE *W. M. Jones*GEEIA *Ralph S. Hager*

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

Transmission Path: From Station TKA to Station TKH

STATION TKA

EXPECTED ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.5</u> Units
B. Power Output	Minimum +28 dbm	<u>28.8</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>7.83500</u> GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>7.83440</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

2. TRANSMITTER "B"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.5</u> Units
B. Power Output	Minimum +28 dbm	<u>30.1</u> dbm

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BIG RALLY II PROJECT

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.15500 GC
2) Measured Freq. (AFC ON)	+ 0.005% of Assigned Freq.	8.15224 GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	10
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	9.5

DATE 22 OCTOBER, 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

4-28

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION TKATransmission Path: From Station TKA to Station TKR

EXPECTED ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.7</u> Units
B. Power Output	Minimum +28 dbm	<u>28.1</u> dbm
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.075</u> GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>8.0739</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>9.5</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>9.5</u>

2. TRANSMITTER "B"

A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.6</u> Units
B. Power Output	Minimum +28 dbm	<u>28.5</u> dbm

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.07506C
2) Measured Freq. (AFC ON)	+0.005% of Assigned Freq.	8.07498GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>1000</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>9.5</u>

DATE 23 OCTOBER, 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

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FEDERAL ELECTRIC CORPORATION

BR II/81 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION TKR

Transmission Path:

From Station TKRto Station TKA

EXPECTED

ACTUAL

1. TRANSMITTER "A"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units 2.8 Units

B. Power Output

Minimum +28 dbm 30.4 dbm

C. Transmitter RF Frequency

1) Assigned Operating Freq.

8.265 GC

2) Measured Freq. (AFC ON)

 $\pm 0.005\%$ of
Assigned Freq.8.26372 GC3) ACF PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 Div CW)

Minimum 9

104) AFC PULL-IN M1 Reading
(Detune Mech. Freq. Adj.
5 DIV CCW)

Minimum 9

10

2. TRANSMITTER "B"

A. TX Klystron Beam Current

(35-85MA) 1.5-3.6 Units 2.75 Units

B. Power Output

Minimum +28 dbm 29.0 dbm

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FEDERAL ELECTRIC CORPORATION

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.265 8.265 GC
2) Measured Freq. (AFC ON)	+0.005% of Assigned Freq.	8.26411 GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

DATE 22 OCTOBER 1963

TESTER Raymond SandersonSUPERVISOR Raymond SandersonQUALITY ASSURANCE Stan PondellGEEIA Ralph Kruger

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

		STATION	TKR
Transmission Path:		From Station	to Station
		TKR	TIZ
		EXPECTED	ACTUAL
1. TRANSMITTER "A"			
A.	TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>2.90</u> Units
B.	Power Output	Minimum +28 dbm	<u>+29.8</u> dbm
C.	Transmitter RF Frequency		
	1) Assigned Operating Freq.		<u>8225</u> GC
	2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>*8.22508</u> GC
	3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9 <u>9 SEC.</u>	<u>10</u>
	4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9 <u>45 SEC</u>	<u>10</u>
2. TRANSMITTER "B"			
A.	TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.10</u> Units
B.	Power Output	Minimum +28 dbm	<u>+29.3</u> dbm

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FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		<u>8.225</u> GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	<u>*8.22124</u> GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9 <u>15 SEC.</u>	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9 <u>15 SEC.</u>	<u>10</u>

* OUT OF SPECIFICATIONDATE 12 NOVEMBER 1963TESTER *[Signature]*SUPERVISOR *[Signature]*QUALITY ASSURANCE *[Signature]*GEEIA VERIFIED 11/12/63

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION TIZTransmission Path: From Station TIZ to Station TKR

	EXPECTED	ACTUAL
1. TRANSMITTER "A"		
A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.3</u> Units
B. Power Output	Minimum +28 dbm	<u>28.5</u> dbm
C. Transmitter RF Frequency		8.035
1) Assigned Operating Freq.		8.035
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	8.03 <u>4960</u> GC
3) ACF PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 Div CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>
2. TRANSMITTER "B"		
A. TX Klystron Beam Current	(35-85MA) 1.5-3.6 Units	<u>3.0</u> Units
B. Power Output	Minimum +28 dbm	<u>29.0</u> dbm

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BIG RALLY II PROJECT

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MW-503A LOS STATION TEST

	EXPECTED	ACTUAL
C. Transmitter RF Frequency		
1) Assigned Operating Freq.		8.035 GC
2) Measured Freq. (AFC ON)	$\pm 0.005\%$ of Assigned Freq.	* 8.033840 GC
3) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CW)	Minimum 9	<u>10</u>
4) AFC PULL-IN M1 Reading (Detune Mech. Freq. Adj. 5 DIV CCW)	Minimum 9	<u>10</u>

DATE 10 NOVEMBER 1963TESTER James LongshawSUPERVISOR Paul J. J. J.QUALITY ASSURANCE J. M. M. J.GEEIA A. J. J.

* OUT OF SPECS

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GPA

Transmitter Path:

From Station GIM
GPAto Station GPA
GM

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>28</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-35</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-20</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-85</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>-26</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>Pegged</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>19.2</u> <u>-20.5</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-85.7</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-3</u> db

DATE 12 November 1963TESTER W. J. SchumakerSUPERVISOR P. SweetQUALITY ASSURANCE Al. CairnsGEEIA Gerald A. Holmes

BRII/82

SITE GPA(GDM)

REF: DD/250 Item # 16

6 Feb. 1964

REceiver 'B'.

C . I.F. Amp Noise Level

-17+ 3db

-19.2db

MC:mc

4-37A

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BR II/82 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GPA

Transmitter Path:

From Station GTA to Station GPA

EXPECTED ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	29 52 MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	52.8 45
C. 1F AMP Noise Level	-17 ⁺ 3 db	19.9 db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	83.3 dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	3.1 db

2. RECEIVER B

A. RX Klystron Beam Current	15-32 MA	25 MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	42
C. 1F AMP Noise Level	-17 ⁺ 3 db	20.3 db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	81.9 dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	3.0 db

DATE 14 November 1963TESTER W. J. SchreyerSUPERVISOR P. SweeneyQUALITY ASSURANCE W. K. KingGEEIA Ronald A. Watson

FEDERAL ELECTRIC CORPORATION

BR II/82 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GIM

Transmitter Path:

From Station GPA
GIM to Station GIM
GPA

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>30</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-33</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-17.9</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-85.2</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-.2</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32 MA	<u>24</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-40</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-17.8</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-86.7</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-.4</u> db

DATE 12 November 1963TESTER Wm S. GraySUPERVISOR R. AllenQUALITY ASSURANCE J. BouchetGEEIA Ralph S. Kugler

FEDERAL ELECTRIC CORPORATION

BR II/82 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GTA

Transmitter Path:

From Station GPA
GTA to Station GTA
GPA

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>28</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>Pegged</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-19.2</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-86</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.6</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>28</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-18</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-86.7</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2</u> db

DATE 14 November 1963TESTER Wm. J. MaySUPERVISOR S. P. BennettQUALITY ASSURANCE BoucherGEEIA Ralph L. Kruger

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GHO

Transmitter Path:

From Station GHO to Station GAG

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>25</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	^{mc} <u>-50</u> /Pegged
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-17.6</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-86.5</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-1.7</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>-21</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>Pegged</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-18.2</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-85.5</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.6</u> db

DATE 8 January 1964TESTER V QuinnSUPERVISOR Ed MahlenQUALITY ASSURANCE M. CrisofGEEIA Ralph Kruger

FEDERAL ELECTRIC CORPORATION

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DATA SHEET

MW-503A LOS STATION TEST

STATION GHO

Transmitter Path:

From Station GHO to Station GPE

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>22</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement). MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-18.2</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-86.3</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.3</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>-19</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement). MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-19</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-85.7</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-1.8</u> db

DATE 8 January 1964TESTER V. QuinnSUPERVISOR C. MullenQUALITY ASSURANCE W. CrisGEELA Ralph J. Karger

FEDERAL ELECTRIC CORPORATION

BR II/82

Rev.

BIG RALLY II PROJECT

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MW-503A LOS STATION TEST

STATION GAG

Transmitter Path:

From Station GAGto Station GHO

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>29</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-19</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>87.2</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.3</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>-27</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-19</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>87.2</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-1.3</u> db

DATE 9 January 1964TESTER James J. [Signature]SUPERVISOR Laurel C. [Signature]QUALITY ASSURANCE William R. [Signature]GEEIA Ralph L. [Signature]

AFCS _____

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION GPE

Transmitter Path:

From Station GPEto Station GHO

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>21</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-19</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-86</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.4</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>-29</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-19</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-87</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.8</u> db

DATE 10 Jan 64TESTER Robert AllenSUPERVISOR George C. VileQUALITY ASSURANCE William R. WebbGEEIA Ralph S. Kruger

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION T.I.D.

Transmitter Path:

From Station T.I.D. to Station T.I.C.

EXPECTED ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	23 <u>23</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-24</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-17.4</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-89.4</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-31.5</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32 MA	31 <u>31</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-19.5</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-88.6</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>1.3</u> db

DATE 28 Nov. 1963TESTER J. H. H. H.SUPERVISOR Russell E. CarterQUALITY ASSURANCE Esteban HuntGEEIA Ralph S. HugginsAFCS Carl W. Raddell

FEDERAL ELECTRIC CORPORATION

BR II/82 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TEST

STATION TIC

Transmitter Path:

From Station TIC to Station TID

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>26</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-16.0</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-85.6</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-1.8</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>23</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	Regged Below <u>-50</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-14.7</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-87.6</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-1.8</u> db

DATE 28 November 1963TESTER [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE Stan PandellGEEIA Gerald A. Faber

FEDERAL ELECTRIC CORPORATION

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DATA SHEET

MW-503A LOS STATION TEST

STATION TKG

Transmitter Path:

From Station TKG to Station TAL

EXPECTED ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>25</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ± 3 db	<u>-17.6</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-86.4</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.6</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32 MA	<u>21</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ± 3 db	<u>-18.1</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-85.4</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-1.5</u> db

DATE 12 December 1963TESTER John H. H. H.SUPERVISOR William R. DelbridgeQUALITY ASSURANCE Joseph M. MaloneyGEEIA Dorothy H. Holmes

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MW-503A LOS STATION TEST

STATION TKG

Transmitter Path:

From Station TKG to Station TKA

EXPECTED

ACTUAL

RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>24.0</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-40.0</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-16.5</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-78.0</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>4.4</u> db

RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>26.0</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50.0</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-15.0</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-75.0</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-0.8</u> db

DATE 25 OCTOBER 1963TESTER J. H. H. H.SUPERVISOR William R. R. R.QUALITY ASSURANCE Joe MaloneyGEEIA Ralph L. Kruger

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MW-503A LOS STATION TEST

STATION TALTransmitter Path: From Station TAL to Station TKG

EXPECTED ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>22</u> MA,
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-19.2</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-87.2</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-1.8</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>23</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-19.7</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-87.7</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.3</u> db

DATE 13 DECEMBER, 1963TESTER Raymond C. HendersonSUPERVISOR Donell E. MunnQUALITY ASSURANCE W. H. H. H.GEEIA Ralph S. Kruger

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MW-503A LOS STATION TEST

STATION TKA

Transmitter Path:

From Station TKA to Station TKG

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>2.0</u> MA,
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	RX1, RX2 <u>PEGGED</u> RX3, 21
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-17.5</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-87.6</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>.7</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32 MA	<u>.25</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	RX1, RX2 <u>PEGGED</u> RX3, 21
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-16.8</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-91.8</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>.3</u> db

DATE 22 OCTOBER, 1963TESTER James H. LongmanSUPERVISOR Raymond C. HendersonQUALITY ASSURANCE J. M. MypetteGEEIA Ralph S. Krueger

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MW-503A LOS STATION TEST

STATION TKA

Transmitter Path:

From Station TKA to Station TKR

EXPECTED ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>23</u> MA,
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-31</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-18</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-88.7</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>2.2</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>-27</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-29</u>
C. 1F AMP Noise Level	-17 \pm 3 db	<u>-18.9</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-91.5</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>1.8</u> db

DATE 23 OCTOBER. 1963TESTER James H. LonglandSUPERVISOR Raymond L. GaudinQUALITY ASSURANCE Walter J. K. K.GEEIA Ralph S. Hughes

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MW-503A LOS STATION TEST

STATION TKR

Transmitter Path:

From Station TKR to Station TKA

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>23</u> MA,
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-17.7</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-89.0</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.8</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>-2F.5</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-18.2</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-88.4</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-1.8</u> db

DATE 22 OCTOBER 1963TESTER Raymond J. HendersonSUPERVISOR Raymond J. HendersonQUALITY ASSURANCE W. L. SmithGEEIA Ralph L. Huger

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MW-503A LOS STATION TEST

STATION TKR

Transmitter Path:

From Station TKR to Station TIZ

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>21.0</u> MA,
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	<u>-16.0</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-18.0</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-86.8</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-2.1</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>-25.0</u> MA
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet requirement) MAX -20	> <u>-50</u>
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-18.1</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-88.2</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>-1.3</u> db

DATE 12 NOVEMBER 1963TESTER [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE [Signature]GEEIA VERIFIED 11/12/63

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MW-503A LOS STATION TEST

STATION TIZ

Transmitter Path:

From Station TIZ to Station TKR

EXPECTED

ACTUAL

1. RECEIVER A

A. RX Klystron Beam Current	15-32 MA	<u>22</u> MA, less than <u>-50 *</u>
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet require- ment) MAX -20	
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-17.8</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-89.6</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>2.3</u> db

2. RECEIVER B

A. RX Klystron Beam Current	15-32MA	<u>20</u> MA less than <u>-50 *</u>
B. 1F Limiter Current (Meter M201 Reading)	(-19 will not meet require- ment) MAX -20	
C. 1F AMP Noise Level	-17 ⁺ 3 db	<u>-18.0</u> db
D. Receiver 3 db Quieting Sensitivity	MAX -85 dbm	<u>-86.6</u> dbm
E. 1F AMP Deviation Sensitivity	+3 to -3 db	<u>1.8</u> db

* NOTE: METER OFFSCALE ON RX I POSITION

DATE 10 NOVEMBER, 1963TESTER James LongshawSUPERVISOR Paul FarwellQUALITY ASSURANCE [Signature]GEEIA [Signature]

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MW-503A LOS STATION TESTS

		STATION	GPA	
Transmission Path:	From Station	GPA	to Station	GIM
		EXPECTED	ACTUAL	
1.	<u>HOT STANDBY CONFIGURATION</u>		R%	VSWR
A.	VSWR Measurement at TX Frequency	1.4:1 (16.7%)	<u>4.4</u>	<u>1.10</u> :1
B.	VSWR Measurement at RX Frequency	1.4:1	<u>6.9</u>	<u>1.14</u> :1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>			
A.	VSWR Measurement at TX-A Frequency	1.4:1	_____	_____ :1
B.	VSWR Measurement at TX-B Frequency	1.4:1	_____	_____ :1
C.	VSWR Measurement at RX-A Frequency	1.4:1	_____	_____ :1
D.	VSWR Measurement at RX-B Frequency	1.4:1	_____	_____ :1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>			
A.	Waveguide Run #1			
1)	VSWR Measurement at TX Frequency	1.4:1	_____	_____ :1
2)	VSWR Measurement at RX Frequency	1.4:1	_____	_____ :1
B.	Waveguide Run #2			
1)	VSWR Measurement at TX Frequency	1.4:1	_____	_____ :1
2)	VSWR Measurement at RX Frequency	1.4:1	_____	_____ :1

DATE 12 November 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

FEDERAL ELECTRIC CORPORATION

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Transmission Path:		From Station	GPA	to Station	GPA
		EXPECTED		ACTUAL	
1.	<u>HOT STANDBY CONFIGURATION</u>				
A.	VSWR Measurement at TX Frequency	1.4:1	(16.7%)	1.8	1.03 :1
B.	VSWR Measurement at RX Frequency	1.4:1		3.0	1.06 :1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>				
A.	VSWR Measurement at TX-A Frequency	1.4:1			:1
B.	VSWR Measurement at TX-B Frequency	1.4:1			:1
C.	VSWR Measurement at RX-A Frequency	1.4:1			:1
D.	VSWR Measurement at RX-B Frequency	1.4:1			:1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>				
A.	Waveguide Run #1				
1)	VSWR Measurement at TX Frequency	1.4:1			:1
2)	VSWR Measurement at RX Frequency	1.4:1			:1
B.	Waveguide Run #2				
1)	VSWR Measurement at TX Frequency	1.4:1			:1
2)	VSWR Measurement at RX Frequency	1.4:1			:1

DATE 12 November 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

FEDERAL ELECTRIC CORPORATION

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MW-503A LOS STATION TESTS

STATION GIM

Transmission Path:

From Station GIM to Station GPA

		EXPECTED	R%	ACTUAL
				VSWR
1.	<u>HOT STANDBY CONFIGURATION</u>			
A.	VSWR Measurement at TX Frequency	1.4:1 (16.7%)	<u>6</u>	<u>1.10</u> :1
B.	VSWR Measurement at RX Frequency	1.4:1	<u>7.6</u>	<u>1.14</u> :1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>			
A.	VSWR Measurement at TX-A Frequency	1.4:1	_____	_____:1
B.	VSWR Measurement at TX-B Frequency	1.4:1	_____	_____:1
C.	VSWR Measurement at RX-A Frequency	1.4:1	_____	_____:1
D.	VSWR Measurement at RX-B Frequency	1.4:1	_____	_____:1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>			
A.	Waveguide Run #1			
1)	VSWR Measurement at TX Frequency	1.4:1	_____	_____:1
2)	VSWR Measurement at RX Frequency	1.4:1	_____	_____:1
B.	Waveguide Run #2			
1)	VSWR Measurement at TX Frequency	1.4:1	_____	_____:1
2)	VSWR Measurement at RX Frequency	1.4:1	_____	_____:1

DATE 12 November 1963TESTER M. J. GraySUPERVISOR AllenQUALITY ASSURANCE BouchardGEEIA Ralph Bruegel

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MW-503A LOS STATION TESTS

STATION G T A

Transmission Path:

From Station G T Ato Station G P A

EXPECTED

ACTUAL

1. HOT STANDBY CONFIGURATIONA. VSWR Measurement at TX
Frequency

1.4:1 (16.7%)

R%

6

VSWR

1.13:1B. VSWR Measurement at RX
Frequency

1.4:1

9.21.20:12. FREQUENCY DIVERSITY CONFIGURATIONA. VSWR Measurement at TX-A
Frequency

1.4:1

:1

B. VSWR Measurement at TX-B
Frequency

1.4:1

:1

C. VSWR Measurement at RX-A
Frequency

1.4:1

:1

D. VSWR Measurement at RX-B
Frequency

1.4:1

:1

3. SPACE DIVERSITY CONFIGURATION

A. Waveguide Run #1

1) VSWR Measurement at TX
Frequency

1.4:1

:1

2) VSWR Measurement at RX
Frequency

1.4:1

:1

B. Waveguide Run #2

1) VSWR Measurement at TX
Frequency

1.4:1

:1

2) VSWR Measurement at RX
Frequency

1.4:1

:1

DATE 14 November 1963TESTER W. S. GraySUPERVISOR S. B. BrandoQUALITY ASSURANCE J. BrucherGEEIA Ralph H. Kruger

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MW-503A LOS STATION TESTS

Transmission Path:		From Station	GHO	to Station	GAG
		EXPECTED		ACTUAL	
			R%	VSWR	
1.	<u>HOT STANDBY CONFIGURATION</u>				
A.	VSWR Measurement at TX Frequency	1.4:1 (16.7%)	<u>4.7</u>	<u>1.10</u>	:1
B.	VSWR Measurement at RX Frequency	1.4:1	<u>5</u>	<u>1.11</u>	:1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>				
A.	VSWR Measurement at TX-A Frequency	1.4:1	_____	_____	:1
B.	VSWR Measurement at TX-B Frequency	1.4:1	_____	_____	:1
C.	VSWR Measurement at RX-A Frequency	1.4:1	_____	_____	:1
D.	VSWR Measurement at RX-B Frequency	1.4:1	_____	_____	:1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>				
A.	Waveguide Run #1				
1)	VSWR Measurement at TX Frequency	1.4:1	_____	_____	:1
2)	VSWR Measurement at RX Frequency	1.4:1	_____	_____	:1
B.	Waveguide Run #2				
1)	VSWR Measurement at TX Frequency	1.4:1	_____	_____	:1
2)	VSWR Measurement at RX Frequency	1.4:1	_____	_____	:1

DATE 8 January 1964TESTER V. QuinnSUPERVISOR C. MullenQUALITY ASSURANCE M. OnofreGEEIA Ralph S. Kruger

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MW-503A LOS STATION TESTS

Transmission Path:		From Station	STATION	to Station	GHO
		GHO		GPE	
		EXPECTED		ACTUAL	
1.	<u>HOT STANDBY CONFIGURATION</u>			R%	VSWR
A.	VSWR Measurement at TX Frequency	1.4:1	(16.7%)	<u>6.3</u>	<u>1.13</u> :1
B.	VSWR Measurement at RX Frequency	1.4:1		<u>4.3</u>	<u>1.09</u> :1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>				
A.	VSWR Measurement at TX-A Frequency	1.4:1		_____	_____:1
B.	VSWR Measurement at TX-B Frequency	1.4:1		_____	_____:1
C.	VSWR Measurement at RX-A Frequency	1.4:1		_____	_____:1
D.	VSWR Measurement at RX-B Frequency	1.4:1		_____	_____:1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>				
A.	Waveguide Run #1				
	1) VSWR Measurement at TX Frequency	1.4:1		_____	_____:1
	2) VSWR Measurement at RX Frequency	1.4:1		_____	_____:1
B.	Waveguide Run #2				
	1) VSWR Measurement at TX Frequency	1.4:1		_____	_____:1
	2) VSWR Measurement at RX Frequency	1.4:1		_____	_____:1

DATE 8 January 1964TESTER V. QuinnSUPERVISOR CorneliusQUALITY ASSURANCE M. Co. afGEEIA Ralph L. Kruger

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MW-503A LOS STATION TESTS

STATION GAG

Transmission Path:

From Station GAGto Station GHO

		EXPECTED	R%	ACTUAL VSWR
1.	<u>HOT STANDBY CONFIGURATION</u>			
A.	VSWR Measurement at TX Frequency	1.4:1 (16.7%)	<u>4</u>	<u>1.08</u> :1
B.	VSWR Measurement at RX Frequency	1.4:1	<u>2.8</u>	<u>1.05</u> :1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>			
A.	VSWR Measurement at TX-A Frequency	1.4:1	_____	_____:1
B.	VSWR Measurement at TX-B Frequency	1.4:1	_____	_____:1
C.	VSWR Measurement at RX-A Frequency	1.4:1	_____	_____:1
D.	VSWR Measurement at RX-B Frequency	1.4:1	_____	_____:1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>			
A.	Waveguide Run #1			
1)	VSWR Measurement at TX Frequency	1.4:1	_____	_____:1
2)	VSWR Measurement at RX Frequency	1.4:1	_____	_____:1
B.	Waveguide Run #2			
1)	VSWR Measurement at TX Frequency	1.4:1	_____	_____:1
2)	VSWR Measurement at RX Frequency	1.4:1	_____	_____:1

DATE 9 January 1964TESTER James J. [Signature]SUPERVISOR Randall C. [Signature]QUALITY ASSURANCE William R. [Signature]GEEIA Ralph A. [Signature]

AFCS _____

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MW-503A LOS STATION TESTS

Transmission Path:	From Station	GPE	to Station	STATION	GPE
					GHO
				EXPECTED	ACTUAL
1.	<u>HOT STANDBY CONFIGURATION</u>				
	A.	VSWR Measurement at TX Frequency	1.4:1 (16.7%)	R% 3.2	VSWR 1.06 :1
	B.	VSWR Measurement at RX Frequency	1.4:1	3.4	1.07 :1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>				
	A.	VSWR Measurement at TX-A Frequency	1.4:1	_____	_____ :1
	B.	VSWR Measurement at TX-B Frequency	1.4:1	_____	_____ :1
	C.	VSWR Measurement at RX-A Frequency	1.4:1	_____	_____ :1
	D.	VSWR Measurement at RX-B Frequency	1.4:1	_____	_____ :1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>				
	A.	Waveguide Run #1			
		1) VSWR Measurement at TX Frequency	1.4:1	_____	_____ :1
		2) VSWR Measurement at RX Frequency	1.4:1	_____	_____ :1
	B.	Waveguide Run #2			
		1) VSWR Measurement at TX Frequency	1.4:1	_____	_____ :1
		2) VSWR Measurement at RX Frequency	1.4:1	_____	_____ :1

DATE 10 Jan 64

TESTER Robert Allen

SUPERVISOR George C. Vile

QUALITY ASSURANCE William R. Wofford

GEEIA Ralph S. Krueger

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MW-503A LOS STATION TESTS

STATION T.I.D.Transmission Path: From Station T.I.D. to Station T.I.C.

	EXPECTED		ACTUAL
1. <u>HOT STANDBY CONFIGURATION</u>		R%	VSWR
A. VSWR Measurement at TX Frequency	1.4:1 (16.7%)	<u>6.5</u>	<u>1.14</u> :1
B. VSWR Measurement at RX Frequency	1.4:1	<u>6.2</u>	<u>1.13</u> :1
2. <u>FREQUENCY DIVERSITY CONFIGURATION</u>	N/A		
A. VSWR Measurement at TX-A Frequency	1.4:1	_____	_____:1
B. VSWR Measurement at TX-B Frequency	1.4:1	_____	_____:1
C. VSWR Measurement at RX-A Frequency	1.4:1	_____	_____:1
D. VSWR Measurement at RX-B Frequency	1.4:1	_____	_____:1
3. <u>SPACE DIVERSITY CONFIGURATION</u>			
A. Waveguide Run #1			
1) VSWR Measurement at TX Frequency	1.4:1	_____	_____:1
2) VSWR Measurement at RX Frequency	1.4:1	_____	_____:1
B. Waveguide Run #2			
1) VSWR Measurement at TX Frequency	1.4:1	_____	_____:1
2) VSWR Measurement at RX Frequency	1.4:1	_____	_____:1

DATE 28, Nov. 1963TESTER J. D. [Signature]SUPERVISOR Russell E. CarterQUALITY ASSURANCE Patricia HuntGEEIA Ralph S. KrugerAFCS Carl W. Russell 11-63

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MW-503A LOS STATION TESTS

STATION TIC

Transmission Path:

From Station TICto Station TID

	EXPECTED		ACTUAL
1. <u>HOT STANDBY CONFIGURATION</u>		R% VSWR	
A. VSWR Measurement at TX Frequency	1.4:1 (16.7%)	<u>3%</u>	<u>1.06</u> :1
B. VSWR Measurement at RX Frequency	1.4:1	<u>10%</u>	<u>1.22</u> :1
2. <u>FREQUENCY DIVERSITY CONFIGURATION</u>			
A. VSWR Measurement at TX-A Frequency	1.4:1	<u>N/A</u>	<u>N/A</u> :1
B. VSWR Measurement at TX-B Frequency	1.4:1	<u>N/A</u>	<u>N/A</u> :1
C. VSWR Measurement at RX-A Frequency	1.4:1	<u>N/A</u>	<u>N/A</u> :1
D. VSWR Measurement at RX-B Frequency	1.4:1	<u>N/A</u>	<u>N/A</u> :1
3. <u>SPACE DIVERSITY CONFIGURATION</u>			
A. Waveguide Run #1			
1) VSWR Measurement at TX Frequency	1.4:1	<u>N/A</u>	<u>N/A</u> :1
2) VSWR Measurement at RX Frequency	1.4:1	<u>N/A</u>	<u>N/A</u> :1
B. Waveguide Run #2			
1) VSWR Measurement at TX Frequency	1.4:1	<u>N/A</u>	<u>N/A</u> :1
2) VSWR Measurement at RX Frequency	1.4:1	<u>N/A</u>	<u>N/A</u> :1

DATE 28 November 1963TESTER [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE [Signature]GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

Transmission Path:		From Station	TKG	to Station	STATION	TKG	TAL
		EXPECTED		ACTUAL			
1.	<u>HOT STANDBY CONFIGURATION</u>						
	A. VSWR Measurement at TX Frequency	1.4:1	(16.7%)	<u>N/A</u>	<u>N/A</u>	:1	
	B. VSWR Measurement at RX Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>						
	A. VSWR Measurement at TX-A Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
	B. VSWR Measurement at TX-B Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
	C. VSWR Measurement at RX-A Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
	D. VSWR Measurement at RX-B Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
3.	<u>SPACE DIVERSITY CONFIGURATION</u>						
	A. Waveguide Run #1						
	1) VSWR Measurement at TX Frequency	1.4:1		<u>3.5%</u>	<u>1.08</u>	:1	
	2) VSWR Measurement at RX Frequency	1.4:1		<u>3.9%</u>	<u>1.08</u>	:1	
	B. Waveguide Run #2						
	1) VSWR Measurement at TX Frequency	1.4:1		<u>6.0%</u>	<u>1.13</u>	:1	
	2) VSWR Measurement at RX Frequency	1.4:1		<u>6.0%</u>	<u>1.13</u>	:1	

DATE 14 December 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

FEDERAL ELECTRIC CORPORATION

BR II/83 Rev.

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MW-503A LOS STATION TESTS

Transmission Path:		From Station	TKG	to Station	TKA
		EXPECTED		R%	ACTUAL VSWR
1.	<u>HOT STANDBY CONFIGURATION</u>				
A.	VSWR Measurement at TX Frequency	1.4:1	(16.7%)	<u>N/a</u>	<u>N/A</u> :1
B.	VSWR Measurement at RX Frequency	1.4:1		<u>N/A</u>	<u>N/A</u> :1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>				
A.	VSWR Measurement at TX-A Frequency	1.4:1		<u>5%</u>	<u>1.10</u> :1
B.	VSWR Measurement at TX-B Frequency	1.4:1		<u>5.5%</u>	<u>1.10</u> :1
C.	VSWR Measurement at RX-A Frequency	1.4:1		<u>8.0%</u>	<u>1.17</u> :1
D.	VSWR Measurement at RX-B Frequency	1.4:1		<u>6.0%</u>	<u>1.13</u> :1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>				
A.	Waveguide Run #1				
1)	VSWR Measurement at TX Frequency	1.4:1		<u>N/A</u>	<u>N/A</u> :1
2)	VSWR Measurement at RX Frequency	1.4:1		<u>N/A</u>	<u>N/A</u> :1
B.	Waveguide Run #2				
1)	VSWR Measurement at TX Frequency	1.4:1		<u>N/A</u>	<u>N/A</u> :1
2)	VSWR Measurement at RX Frequency	1.4:1		<u>N/A</u>	<u>N/A</u> :1

DATE 25 OCTOBER 1963TESTER John H. [Signature]SUPERVISOR William L. [Signature]QUALITY ASSURANCE Joe MalbouisGEEIA Ralph S. [Signature]

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

Transmission Path:		From Station	TAL	to Station	TAL	TKG
		STATION				
		EXPECTED		ACTUAL		
1.	<u>HOT STANDBY CONFIGURATION</u>	N/A		R%	VSWR	
A.	VSWR Measurement at TX Frequency	1.4:1	(16.7%)	_____	_____ :1	
B.	VSWR Measurement at RX Frequency	1.4:1		_____	_____ :1	
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>	N/A				
A.	VSWR Measurement at TX-A Frequency	1.4:1		_____	_____ :1	
B.	VSWR Measurement at TX-B Frequency	1.4:1		_____	_____ :1	
C.	VSWR Measurement at RX-A Frequency	1.4:1		_____	_____ :1	
D.	VSWR Measurement at RX-B Frequency	1.4:1		_____	_____ :1	
3.	<u>SPACE DIVERSITY CONFIGURATION</u>					
A.	Waveguide Run #1					
	1) VSWR Measurement at TX Frequency	1.4:1		5%	1.10 :1	
	2) VSWR Measurement at RX Frequency	1.4:1		6.6% 6%	1.14 1.12 :1	
B.	Waveguide Run #2					
	1) VSWR Measurement at TX Frequency	1.4:1		6.6%	1.14 :1	
	2) VSWR Measurement at RX Frequency	1.4:1		1%	1.08 :1	

DATE 13 DECEMBER, 1963

TESTER *[Signature]*SUPERVISOR *Donald E. [Signature]*QUALITY ASSURANCE *[Signature]*GEEIA *Ralph S. [Signature]*

BR II/83 Rev.

DATE 24 OCTOBER, 1963
TESTER James H. Longman
SUPERVISOR Raymond L. C. Brown
QUALITY ASSURANCE J. M. Murphy
GEEIA Ralph S. Kreger

FEDERAL ELECTRIC CORPORATION

BR II/83 Rev.

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MW-503A LOS STATION TESTS

Transmission Path:		From Station	TKA	to Station	TKR
		STATION TKA			
		TKR			
		EXPECTED		ACTUAL	
				R%	VSWR
1.	<u>HOT STANDBY CONFIGURATION</u>				
A.	VSWR Measurement at TX Frequency	1.4:1	(16.7%)		:1
B.	VSWR Measurement at RX Frequency	1.4:1			:1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>				
A.	VSWR Measurement at TX-A Frequency	1.4:1			:1
B.	VSWR Measurement at TX-B Frequency	1.4:1			:1
C.	VSWR Measurement at RX-A Frequency	1.4:1			:1
D.	VSWR Measurement at RX-B Frequency	1.4:1			:1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>			TKA (TKR)	
A.	Waveguide Run #1				
1)	VSWR Measurement at TX Frequency	1.4:1		11 %	1.24 :1
2)	VSWR Measurement at RX Frequency	1.4:1		8.2%	1.18 :1
B.	Waveguide Run #2				
1)	VSWR Measurement at TX Frequency	1.4:1		4.9%	1.11 :1
2)	VSWR Measurement at RX Frequency	1.4:1		9.0%	1.08 :1

DATE 21 OCTOBER 1963
 TESTER James H. Longshore
 SUPERVISOR James H. Longshore
 QUALITY ASSURANCE W. W. W. W.
 GEEIA Ralph S. Hager

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

Transmission Path:		From Station	TKR	to Station	TKA	STATION	TKR
		EXPECTED		ACTUAL		R%	VSWR
1.	<u>HOT STANDBY CONFIGURATION</u>						
A.	VSWR Measurement at TX Frequency	1.4:1	(16.7%)	<u>N/A</u>	<u>N/A</u>	:1	
B.	VSWR Measurement at RX Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>						
A.	VSWR Measurement at TX-A Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
B.	VSWR Measurement at TX-B Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
C.	VSWR Measurement at RX-A Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
D.	VSWR Measurement at RX-B Frequency	1.4:1		<u>N/A</u>	<u>N/A</u>	:1	
3.	<u>SPACE DIVERSITY CONFIGURATION</u>						
A.	Waveguide Run #1 "A"						
1)	VSWR Measurement at TX Frequency	1.4:1		<u>5%</u>	<u>1.15</u>	:1	
2)	VSWR Measurement at RX Frequency	1.4:1		<u>4%</u>	<u>1.08</u>	:1	
B.	Waveguide Run #2 "B"						
1)	VSWR Measurement at TX Frequency	1.4:1		<u>3.4%</u>	<u>1.07</u>	:1	
2)	VSWR Measurement at RX Frequency	1.4:1		<u>3.2%</u>	<u>1.07</u>	:1	

DATE 24 OCTOBER 1963TESTER *Raymond L. Brown*SUPERVISOR *Raymond L. Brown*QUALITY ASSURANCE *Stanley P.*GEEIA *Clifford* *Brantley*

FEDERAL ELECTRIC CORPORATION

BR II/83 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

Transmission Path:		From Station	TKR	to Station	TKR	TIZ
		STATION				
				EXPECTED	R%	ACTUAL
						VSWR
1.	<u>HOT STANDBY CONFIGURATION</u>					
A.	VSWR Measurement at TX Frequency	1.4:1	(16.7%)	N/A	N/A	:1
B.	VSWR Measurement at RX Frequency	1.4:1		N/A	N/A	:1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>					
A.	VSWR Measurement at TX-A Frequency	1.4:1		N/A	N/A	:1
B.	VSWR Measurement at TX-B Frequency	1.4:1		N/A	N/A	:1
C.	VSWR Measurement at RX-A Frequency	1.4:1		N/A	N/A	:1
D.	VSWR Measurement at RX-B Frequency	1.4:1		N/A	N/A	:1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>					
A.	Waveguide Run #1					
1)	VSWR Measurement at TX Frequency	1.4:1		2.5%	1:104	:1
2)	VSWR Measurement at RX Frequency	1.4:1		8.2%	1:117	:1
B.	Waveguide Run #2					
1)	VSWR Measurement at TX Frequency	1.4:1		4.0%	1:108	:1
2)	VSWR Measurement at RX Frequency	1.4:1		4.0%	1:108	:1

DATE 12 NOVEMBER 1963

TESTER *[Signature]*SUPERVISOR *[Signature]*QUALITY ASSURANCE *[Signature]*

GEEIA VERIFIED 11/12/63

FEDERAL ELECTRIC CORPORATION

BR II/83 Rev.

BIG RALLY II PROJECT

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MW-503A LOS STATION TESTS

Transmission Path:		From Station	TIZ	to Station	TIZ	TKR
		STATION		TIZ		
		EXPECTED		ACTUAL		
				R% VSWR		
1.	<u>HOT STANDBY CONFIGURATION</u>					
A.	VSWR Measurement at TX Frequency	1.4:1	(16.7%)	_____	_____	:1
B.	VSWR Measurement at RX Frequency	1.4:1		_____	_____	:1
2.	<u>FREQUENCY DIVERSITY CONFIGURATION</u>					
A.	VSWR Measurement at TX-A Frequency	1.4:1		_____	_____	:1
B.	VSWR Measurement at TX-B Frequency	1.4:1		_____	_____	:1
C.	VSWR Measurement at RX-A Frequency	1.4:1		_____	_____	:1
D.	VSWR Measurement at RX-B Frequency	1.4:1		_____	_____	:1
3.	<u>SPACE DIVERSITY CONFIGURATION</u>					
A.	Waveguide Run #1					
1)	VSWR Measurement at TX Frequency	1.4:1		10%	1.22	:1
2)	VSWR Measurement at RX Frequency	1.4:1		2.2%	1.04	:1
B.	Waveguide Run #2					
1)	VSWR Measurement at TX Frequency	1.4:1		5.6%	1.11	:1
2)	VSWR Measurement at RX Frequency	1.4:1		5.4%	1.11	:1

NOTE: ABOVE MEASUREMENTS MADE
WITH GAS BARRIER ON WAVEGUIDE

DATE 10 NOVEMBER 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

STATION GPA Transmission Path: From Station GPA to Station GDM

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

mcmcmcmcmcmc2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

mcmcmcmcmcmc

FEDERAL ELECTRIC CORPORATION
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3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

mc

mc

mc

mc

mc

4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

mc

mc

mc

mc

mc

5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

mc

mc

mc

mc

mc

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

mc

mc

mc

mc

mc

DATE 12 November 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

Transmission Path: From Station GPA to Station GTA

REQUIREMENT	INITIAL IF OK
1. <u>"A" AC POWER FAILURE</u>	
A. Patch Panel Equip Alarm Lights	<u>me</u>
B. External Alarms Energized	<u>me</u>
C. "A" Diversity Path Alarm Light	<u>me</u>
D. "A" Power Supply Alarm Lamp Lights (where applicable)	<u>me</u>
E. Audible Alarm	<u>me</u>
F. Hot-Standby & Space Diversity. The "A" Fault and "B" Inservice Lamps on the SW/O Control Units Lit	<u>me</u>
2. <u>"B" AC POWER FAILURE</u>	
A. Patch Panel Equip Alarm Lights	<u>me</u>
B. External Alarms Energized	<u>me</u>
C. "B" Diversity Alarms Energized	<u>me</u>
D. "B" Power Supply Alarm Lamp Lights (where applicable)	<u>me</u>
E. Audible Alarm	<u>me</u>
F. Hot-Standby & Space Diversity. The "B" Fault & "A" Inservice Lamps on the SW/O Control Units Lit	<u>me</u>

FEDERAL ELECTRIC CORPORATION
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3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

me
me
me
me

me

4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

me
me
me
me

me

5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

me
me
me

me

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

mc

mc

mc

mc

mc

DATE 14 MAY 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

STATION GIMTransmission Path: From Station GIM to Station GPA

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights RSK
- B. External Alarms Energized RSK
- C. "A" Diversity Path Alarm Light RSK
- D. "A" Power Supply Alarm Lamp Lights
(where applicable) RSK
- E. Audible Alarm RSK
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit RSK

2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights RSK
- B. External Alarms Energized RSK
- C. "B" Diversity Alarms Energized RSK
- D. "B" Power Supply Alarm Lamp Lights
(where applicable) RSK
- E. Audible Alarm RSK
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit RSK

FEDERAL ELECTRIC CORPORATION
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3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

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MW-503A LOS STATION TESTS

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

DATE 12 November 1963

TESTER *W. J. May*

SUPERVISOR *R. Allen*

QUALITY ASSURANCE *J. Brucher*

GEEIA *Ralph S. Kruger*

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

STATION G T A

Transmission Path:

From Station G T Ato Station G P A

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

RSKRSKRSKRSKRSKRSK2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

RSKRSKRSKRSKRSKRSK

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MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSKRSKRSKRSKRSK4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSKRSKRSKRSKRSK5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSKRSKRSKRSKRSK

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

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MW-503A LOS STATION TESTS

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

DATE 11 November 1967

TESTER *W. S. Gray*

SUPERVISOR *S. B. Barrett*

QUALITY ASSURANCE *J. Boncher*

GEEIA *Ralph S. Hager*

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

STATION GH0Transmission Path: From Station GH0 to Station GAG

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

RSKRSKRSKRSKRSKRSK2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

RSKRSKRSKRSKRSKRSK

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3. "A" MODULATION ALARM

- | | |
|--|------------|
| A. "A" AFC Pilot Sensor Alarm | <u>RSK</u> |
| B. Patch Panel Equip Alarm Lights | <u>RSK</u> |
| C. External Alarms Energized | <u>RSK</u> |
| D. Audible Alarm | <u>RSK</u> |
| E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit | <u>RSK</u> |

4. "B" MODULATION ALARM

- | | |
|--|------------|
| A. "B" AFC Pilot Sensor Alarm Lamp Lights | <u>RSK</u> |
| B. Patch Panel Equip Alarm Lights | <u>RSK</u> |
| C. External Alarms Energized | <u>RSK</u> |
| D. Audible Alarm | <u>RSK</u> |
| E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit | <u>RSK</u> |

5. "A" RF POWER ALARM

- | | |
|--|------------|
| A. "A" AFC Meter Pulses | <u>RSK</u> |
| B. Patch Panel Equip Alarm Lights | <u>RSK</u> |
| C. External Alarms Energized | <u>RSK</u> |
| D. Audible Alarm | <u>RSK</u> |
| E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit | <u>RSK</u> |

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6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

DATE 8 January 1964

TESTER V. Quinn

SUPERVISOR CD Mahler

QUALITY ASSURANCE M. Corio

GEEIA Ralph L. Kruger

FEDERAL ELECTRIC CORPORATION

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Transmission Path: From Station GHO to Station GHO
GPE

REQUIREMENT	INITIAL IF OK
1. <u>"A" AC POWER FAILURE</u>	
A. Patch Panel Equip Alarm Lights	<u>RSK</u>
B. External Alarms Energized	<u>RSK</u>
C. "A" Diversity Path Alarm Light	<u>RSK</u>
D. "A" Power Supply Alarm Lamp Lights (where applicable)	<u>RSK</u>
E. Audible Alarm	<u>RSK</u>
F. Hot-Standby & Space Diversity. The "A" Fault and "B" Inservice Lamps on the SW/O Control Units Lit	<u>RSK</u>
2. <u>"B" AC POWER FAILURE</u>	
A. Patch Panel Equip Alarm Lights	<u>RSK</u>
B. External Alarms Energized	<u>RSK</u>
C. "B" Diversity Alarms Energized	<u>RSK</u>
D. "B" Power Supply Alarm Lamp Lights (where applicable)	<u>RSK</u>
E. Audible Alarm	<u>RSK</u>
F. Hot-Standby & Space Diversity. The "B" Fault & "A" Inservice Lamps on the SW/O Control Units Lit	<u>RSK</u>

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3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

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6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

DATE 8 January 1964
TESTER V. Quinn
SUPERVISOR W. Mahler
QUALITY ASSURANCE M. Caraf
GEEIA Ralph S. Kueger

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

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MW-503A LOS STATION TESTS

STATION GAGTransmission Path: . From Station GAG to Station GHO

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

RSKRSKRSKRSKRSKRSK2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

RSKRSKRSKRSKRSKRSK

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3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

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MW-503A LOS STATION TESTS

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

DATE 9 January 1964

TESTER James J. [Signature]

SUPERVISOR Randall C. [Signature]

QUALITY ASSURANCE William R. [Signature]

GEEIA Ralph S. [Signature]

AFCS _____

FEDERAL ELECTRIC CORPORATION

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DATA SHEET

MW-503A LOS STATION TESTS

Transmission Path: From Station GPE to Station GHO

STATION GPE

GH0

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

RSKRSKRSKRSKRSKRSK2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

RSKRSKRSKRSKRSKRSK

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MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip. Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSKRSKRSKRSKRSK4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSKRSKRSKRSKRSK5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSKRSKRSKRSKRSK

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6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

RSK

RSK

RSK

RSK

DATE 10 Jan 64

TESTER Robert Allen

SUPERVISOR George E. Kline

QUALITY ASSURANCE William R. Smith

GEEIA Ralph S. Krueger

FEDERAL ELECTRIC CORPORATION

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MW-503A LOS STATION TESTS

STATION T.I.D.Transmission Path: From Station T.I.D. to Station T.I.C.

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

R.S.K.R.S.K.R.S.K.R.S.K.R.S.K.R.S.K.2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

R.S.K.R.S.K.R.S.K.R.S.K.R.S.K.R.S.K.

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3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RSK

R.S.K.

R.S.K.

R.S.K.

R.S.K.

4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

R.S.K.

R.S.K.

R.S.K.

R.S.K.

R.S.K.

5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

R.S.K.

R.S.K.

R.S.K.

R.S.K.

R.S.K.

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6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

R.S.K.

R.S.K.

R.S.K.

R.S.K.

R.S.K.

DATE 28 Nov, 1963

TESTER J. D. Smith

SUPERVISOR Russell E. Carter

QUALITY ASSURANCE Patricia H. Hurl

GEEIA Ralph S. Henger

AFC5 Carl W. Rudell

FEDERAL ELECTRIC CORPORATION

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MW-503A LOS STATION TESTS

STATION TIC

Transmission Path:

From Station TICto Station TID

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

J.L.J.L.J.L.J.L.J.L.J.L.2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

J.L.J.L.J.L.J.L.J.L.J.L.

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MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

J.L.
J.L.
J.L.
J.L.
J.L.

4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

J.L.
J.L.
J.L.
J.L.
J.L.

5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

J.L.
J.L.
J.L.
J.L.
J.L.

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6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

J.L.

J.L.

J.L.

J.L.

J.L.

DATE 28 NOVEMBER 1963
TESTER [Signature]
SUPERVISOR [Signature]
QUALITY ASSURANCE [Signature]
GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION

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DATA SHEET

MW-503A LOS STATION TESTS

STATION TKG

Transmission Path: From Station TKG to Station TAL

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

J.H.T.
J.H.T.
J.H.T.
J.H.T.
J.H.T.
J.H.T.

2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

J.H.T.
J.H.T.
J.H.T.
J.H.T.
J.H.T.
J.H.T.

FEDERAL ELECTRIC CORPORATION

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MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

J.H.T.J.H.T.J.H.T.J.H.T.J.H.T.4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

J.H.T.J.H.T.J.H.T.J.H.T.J.H.T.5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

J.H.T.J.H.T.J.H.T.J.H.T.J.H.T.

FEDERAL ELECTRIC CORPORATION

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MW-503A LOS STATION TESTS

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

J.H.T.

J.H.T.

J.H.T.

J.H.T.

J.H.T.

DATE 12 December 1963

TESTER J.H.T.

SUPERVISOR William R. Bridgell

QUALITY ASSURANCE Frank M. Maloney

GEEIA Dorothy A. Volman

FEDERAL ELECTRIC CORPORATION

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DATA SHEET

MW-503A LOS STATION TESTS

STATION TKG

Transmission Path:

From Station TKGto Station TKA

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

DBDBDBDBDBN/A2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

dbDBDBDBDBN/A

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MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

DBDBDBDBN/A4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

DBDBDBDBN/A5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

DBDBDBDBN/A

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

DB

DB

DB

DB

N/A

DATE 25 OCTOBER 1963

TESTER J. N. J. J.

SUPERVISOR R. L. L. L. L.

QUALITY ASSURANCE J. M. M. M.

GEEIA R. L. L. L.

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

STATION TAL

Transmission Path:

From Station TALto Station TKG

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

RCG
RCG
RCG
RCG
RCG
RCG

2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

RCG
RCG
RCG
RCG
RCG
RCG

4-10.9

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
MW-503A LOS STATION TESTS

BR II/84 Rev.

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RCG
RCG
RCG
RCG
RCG
RCG

4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RCG
RCG
RCG
RCG
RCG
RCG
RCG
RCG

5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RCG
RCG
RCG
RCG
RCG
RCG
RCG
RCG

RCG
RCG

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FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
MW-503A LOS STATION TESTS

BR II/84 Rev.

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RCG
RCG

RCG
RCG

RCG
RCG

RCG
RCG

RCG

DATE 13 DECEMBER, 1963

TESTER *John D. ...*

SUPERVISOR *Donald M. ...*

QUALITY ASSURANCE *J. M. ...*

GEEIA *Ralph S. ...*

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FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

STATION TKA

Transmission Path:

From Station TKAto Station TKG

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

GKGKGKGKGKN/A2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

GKGKGKGKGKN/A

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FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

GKGKGKGKN/A4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

GKGKGKGKN/A5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

GKGKGKGKN/A

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FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
MW-503A LOS STATION TESTS

BR II/84 Rev.

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

GK

GK

GK

GK

N/A

DATE 23 OCTOBER, 1963

TESTER *James H. Houghan*

SUPERVISOR *James H. Houghan*

QUALITY ASSURANCE *William Pettit*

GEEIA *Ralph H. Kruger*

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FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

Transmission Path: From Station TKA to Station TKR

STATION TKA

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

OKOKOKOKOKOK2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

OKOKOKOKOKOK

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FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

GKGKGKGKGK4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

GKGKGKGKGK5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

GKGKGKGKGK

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Ldt

GK

GK

GK

GK

GK

DATE 22 OCTOBER, 1963

TESTER James H. Longdon

SUPERVISOR Raymond J. De Luca

QUALITY ASSURANCE W. M. Marjette

GEEIA Ralph S. Kruger

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

STATION TKR

Transmission Path:

From Station TKRto Station TKA

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

RCGRCGRCGRCGRCGRCG2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

RCGRCGRCGRCGRCGRCG

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FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RCGRCGRCGRCGRCG4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RCGRCGRCGRCGRCG5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RCGRCGRCGRCGRCG

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

RCGRCGRCGRCGRCG

DATE 22 OCTOBER 1963

TESTER *Chas. J. H. H.*SUPERVISOR *Chas. J. H. H.*QUALITY ASSURANCE *W. H. H.*GEEIA *Ralph S. Kruger*

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FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

STATION TKRTransmission Path: From Station TKR to Station TIZ

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

j.m.
j.m.
j.m.
j.m.
j.m.
j.m.

2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

j.m.
j.m.
j.m.
j.m.
j.m.
j.m.

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FEDERAL ELECTRIC CORPORATION

BR II/84

Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

Jm
Jm
Jm
Jm

Jm

4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

Jm
Jm
Jm
Jm

Jm

5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

Jm
Jm
Jm
Jm

Jm

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
MW-503A LOS STATION TESTS

BR II/84 Rev.

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

Jm
Jm
Jm
Jm

Jm

DATE 12 NOVEMBER 1963
TESTER [Signature]
SUPERVISOR [Signature]
QUALITY ASSURANCE J. Maloney
GEEIA VERIFIED 11/12/63

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
MW-503A LOS STATION TESTS

BR II/84 Rev.

STATION TIZ

Transmission Path: From Station TIZ to Station TKR

REQUIREMENT

INITIAL IF OK

1. "A" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "A" Diversity Path Alarm Light
- D. "A" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "A" Fault and "B" Inservice
Lamps on the SW/O Control Units Lit

JL
JL
JL
JL
JL
JL

2. "B" AC POWER FAILURE

- A. Patch Panel Equip Alarm Lights
- B. External Alarms Energized
- C. "B" Diversity Alarms Energized
- D. "B" Power Supply Alarm Lamp Lights
(where applicable)
- E. Audible Alarm
- F. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units Lit

JL
JL
JL
JL
JL
JL

FEDERAL ELECTRIC CORPORATION

BR II/84 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS STATION TESTS

3. "A" MODULATION ALARM

- A. "A" AFC Pilot Sensor Alarm
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

JLJLJLJLJL4. "B" MODULATION ALARM

- A. "B" AFC Pilot Sensor Alarm Lamp Lights
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault and "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

JLJLJLJLJL5. "A" RF POWER ALARM

- A. "A" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "A" Fault & "B" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

JLJLJLJLJL

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
MW-503A LOS STATION TESTS

BR II/84 Rev.

6. "B" RF POWER ALARM

- A. "B" AFC Meter Pulses
- B. Patch Panel Equip Alarm Lights
- C. External Alarms Energized
- D. Audible Alarm
- E. Hot-Standby & Space Diversity.
The "B" Fault & "A" Inservice
Lamps on the SW/O Control Units
(J1-J2) Lit

JL

JL

JL

JL

JL

DATE 10 NOVEMBER, 1963

TESTER James Longshan

SUPERVISOR Paul Farosh

QUALITY ASSURANCE J. M. Murphy

GEELA J. P. Farosh

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FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:		From Station	GIM	to Station	GPA	STATION	GPA
						EXPECTED	ACTUAL
1. DIVERSITY TESTS (ALL CONFIGURATIONS)							
A.	Pilot Level at A IN terminals of Control Panel					-47 to -53 db	<u>-51.4 db</u>
B.	Pilot Level at B IN terminals of Control Panel					-47 to -53 db	<u>-52.4 db</u>
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.					-50 \pm 0.25 db	<u>-50.0 db</u>
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.					-50 \pm 0.25 db	<u>-50.1 db</u>
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.					\pm 1.0 db	<u>- .2 db</u>
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.					\pm 1.0 db	<u>- .2 db</u>
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).					-50 \pm 0.5 db	<u>-49.75 db</u>
2. BASEBAND							
A.	Level, 100 Kc RX					-34 \pm 0.5 db	<u>-33.9 db</u>
						-40 \pm 0.5 db	<u>-33.7 db</u>

(GPA ONLY)

(GA-GPA only).

(GPA ONLY)
(GA-GPA only).

FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

B. Frequency	EXPECTED "A"	ACTUAL "B"
12 Kc	(GA-GPA Link Only)	-34.3 -N/A1 db
60 Kc		-33.9 -34.1 db
100 Kc		-34.0 -33.2 db
200 Kc	+0.5 db From 100 Kc Reference Level	-34.2 -33.4 db
350 Kc		-34.0 -33.7 db
400 Kc		-34.3 -33.5 db
500 Kc		-34.4 -34.0 db

3. ORDER WIRE

A. Level, 1 Kc RX	-25 \pm 1 dbm	-25 dbm
B. Frequency Response		
0.5 Kc		-26 dbm
1 Kc		-24.9 dbm
1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	-25 dbm
2 Kc		-25 dbm
2.5 Kc		-25.1 dbm
3 Kc		-25.2 dbm
20 Kc	At least 12 db below Reference	-49 dbm

4. INTERMODULATION DISTORTION

A. One MW-503A Link	Minimum Ratio 45 db	46 db
---------------------	------------------------	-------

5. RECEIVED SIGNAL POWER

A. Receiver A	+26.3 dbm
B. Receiver B	+26.3 dbm

BR11/85

SITE GPA(GIM)
REF: DD/250 Item #17

6 Feb., 1964

2. BASEBAND FREQUENCY RESPONSE.

A. Level, 100KC RX	(RX 'A' on at GIM).	-	<u>-34db</u>
B. Frequency	200KC		<u>-34.2db</u>
	350KC		<u>-34.0db</u>
	400KC		<u>-34.3db</u>

MC:mc

4-128A

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station GIM to Station GPA

6. NET PATH LOSS

A. NPL, Path A

-55.0 db

B. NPL, Path B

-55.0 db

C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station GIM to Station GPA

STATION GPA

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)76.5 db

B. Receiver B

76 dbDATE 13 November 1963TESTER Vincent E. QuinnSUPERVISOR F. SweeneyQUALITY ASSURANCE W. CorioGEEIA Gerald A. Malone

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:	From Station	GTA	to Station	STATION	GPA
				GPA	
				EXPECTED	ACTUAL
1. DIVERSITY TESTS (ALL CONFIGURATIONS)					
A. Pilot Level at A IN terminals of Control Panel				-47 to -53 db	<u>-52</u> db
B. Pilot Level at B IN terminals of Control Panel				-47 to -53 db	<u>-52.8</u> db
C. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.				-50 \pm 0.25 db	<u>-50</u> db
D. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.				-50 \pm 0.25 db	<u>-50</u> db
E. Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.				\pm 1.0 db	<u>-.3</u> db
F. Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.				\pm 1.0 db	<u>-.3</u> db
G. Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).				-50 \pm 0.5 db	<u>-50.1</u> db
2. BASEBAND					A B
A. Level, 100 Kc RX				-34 \pm 0.5 db	-34 <u>-34</u> db
		(GPA ONLY)		-40 \pm 0.5 db	

FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

EXPECTED	ACTUAL
A	B

B. Frequency

12 Kc

(GA-GPA Link Only)

NA NA db

60 Kc

-34.4 -34.3 db

100 Kc

-34 -34 db *me*

200 Kc

± 0.5 db From
100 Kc Reference
Level

-33.8 -33.8 db

350 Kc

-33.9 -33.9 db

400 Kc

-33.9 -33.9 db

500 Kc

-33.9 -33.9 db

3. ORDER WIRE

A. Level, 1 Kc RX

-25 ± 1 dbm-25 dbm

B. Frequency Response

0.5 Kc

-25.8 dbm

1 Kc

-25 dbm

1.5 Kc

-2 db + 1 db
From 1 Kc
Reference Level

-24.9 dbm

2 Kc

-24.6 dbm

2.5 Kc

-24.4 dbm

3 Kc

-24.3 dbm

20 Kc

At least 12 db below Reference

-50 dbm

4. INTERMODULATION DISTORTION

A. One MW-503A Link

Minimum Ratio	A	B
45 db	47 db	48 db

5. RECEIVED SIGNAL POWER

A. Receiver A

-32.2 dbm

B. Receiver B

-32.2 dbm

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

STATION GPA Transmission Path: From Station GTA to Station ?GPA

6. NET PATH LOSS

A. NPL, Path A 61.3 dbB. NPL, Path B 61.3 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station GTA to Station GPA

STATION GPA

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A	(Refer to FIG. 9 of this procedure for the expected results.)	<u>75.5</u> db
B. Receiver B		<u>80.0</u> db

DATE 15 November 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEIA [Signature]

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:		From Station <u>GIM</u>	to Station <u>GPA</u>	STATION <u>GIM</u>
		EXPECTED	ACTUAL	
1. DIVERSITY TESTS (ALL CONFIGURATIONS)				
A.	Pilot Level at A IN terminals of Control Panel	-47 to -53 db	<u>-51.3</u> db	
B.	Pilot Level at B IN terminals of Control Panel	-47 to -53 db	<u>-52.6</u> db	
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db	
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db	
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db	<u>-.5</u> db	
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db	<u>0</u> db	
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db	<u>-50</u> db	
2. BASEBAND				
A.	Level, 100 Kc RX	-34 \pm 0.5 db	<u>-34</u> db	
	(GPA ONLY)	-40 \pm 0.5 db		

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DATA SHEET

MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	db
	60 Kc		<u>+34.3</u> db
	100 Kc		<u>-34.0</u> db
	200 Kc	+0.5 db From 100 Kc Reference Level	<u>-34.4</u> db
	350 Kc		* <u>3.6</u> <u>-34.7</u> db
	400 Kc		* <u>3.5</u> <u>-34.7</u> db
	500 Kc		* <u>3.5</u> <u>-34.9</u> db
		* Out of spec	
3.	ORDER WIRE		
A.	Level, 1 Kc RX	-25 \pm 1 dbm	<u>-25</u> dbm
B.	Frequency Response		
	0.5 Kc		<u>-26</u> dbm
	1 Kc		<u>-25</u> dbm
	1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	<u>-24.5</u> dbm
	2 Kc		<u>-24.5</u> dbm
	2.5 Kc		<u>-26</u> dbm
	3 Kc		<u>-24.5</u> dbm
	20 Kc	At least 12 db below Reference	<u>-41</u> dbm
4.	INTERMODULATION DISTORTION		
A.	One MW-503A Link	Minimum Ratio 45 db	<u>48</u> db
5.	RECEIVED SIGNAL POWER		
A.	Receiver A		<u>-25</u> dbm
B.	Receiver B		<u>-15</u> dbm

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DATA SHEET

MW-503A LOS LINK TEST

SITE G I M

EXPECTED

ACTUAL

B. Frequency

12 Kc

(GA-GPA Link Only)

_____ db

60 Kc

34.3 db

100 Kc

34.0 db

200 Kc

 ± 0.5 db From
100 Kc Reference
Level
33.6 db

350 Kc

33.6 db

400 Kc

33.5 db

500 Kc

33.5 db

3. ORDER WIRE

A. Level, 1 Kc RX

 -25 ± 1 dbm

_____ dbm

B. Frequency Response

0.5 Kc

_____ dbm

1 Kc

_____ dbm

1.5 Kc

 -2 db + 1 db
From 1 Kc
Reference Level

_____ dbm

2 Kc

_____ dbm

2.5 Kc

_____ dbm

3 Kc

_____ dbm

20 Kc

At least 12 db below Reference

_____ dbm

4. INTERMODULATION DISTORTION

A. One MW-503A Link

 Minimum Ratio
45 db

_____ db

5. RECEIVED SIGNAL POWER

A. Receiver A

DATE 3 Feb 66

_____ dbm

B. Receiver B

TESTER [Signature]

_____ dbm

A.F.C.S. [Signature]

Sheet 2 of 4

ISEI Q.A. [Signature]

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DATA SHEET

MW-503A LOS LINK TEST

STATION GIMTransmission Path: From Station GIM to Station GPA

6. NET PATH LOSS

A. NPL, Path A

59.2 db Rcvr "A"

B. NPL, Path B

61.8 db Rcvr "B"

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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DATA SHEET

MW-503A LOS LINK TEST

STATION GIM

Transmission Path:

From Station GIM to Station GPA

EXPECTED

ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A.

(Refer to FIG. 9 of
this procedure for the
expected results.)63
44 db
63
65 db

B. Receiver B

DATE 13 November 1963TESTER Mr. S. J. RaySUPERVISOR R. AllenQUALITY ASSURANCE J. BondGEEIA Ralph H. Hager

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DATA SHEET

MW-503A LOS LINK TEST

STATION G-11

Transmission Path:

From Station G-11 to Station G-11

EXPECTED

ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)63 db

B. Receiver B

63 dbDATE 3 Feb 1964TESTER W. S. [Signature]SUPERVISOR W. S. [Signature]QUALITY ASSURANCE [Signature]GEEIA Quinn W. [Signature]AFCS Test George C. [Signature]

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

STATION G T ATransmission Path: From Station G T A to Station G P A

EXPECTED ACTUAL

1. DIVERSITY TESTS (ALL CONFIGURATIONS)

A. Pilot Level at A IN terminals of Control Panel	-47 to -53 db	<u>-52.5</u> db
B. Pilot Level at B IN terminals of Control Panel	-47 to -53 db	<u>-52</u> db
C. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
D. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
E. Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	+ 1.0 db .5db change	<u>-50.5</u> db
F. Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	+ 1.0 db .25db change	<u>-50.25</u> db
G. Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db	<u>-50.25</u> db

2. BASEBAND

A. Level, 100 Kc RX	-34 \pm 0.5 db	<u>-34</u> db
(GPA ONLY)	-40 \pm 0.5 db	

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DATA SHEET

MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B. Frequency			
12 Kc	(GA-GPA Link Only)		N/A XX-XX-XX db
60 Kc			<u>-34.4</u> db
100 Kc			<u>-34</u> db
200 Kc		± 0.5 db From 100 Kc Reference Level	<u>-33.95</u> db
350 Kc			<u>-33.9</u> db
400 Kc			<u>-33.9</u> db
500 Kc			<u>-34</u> db
3. ORDER WIRE			
A. Level, 1 Kc RX		-25 \pm 1 dbm	<u>-25</u> dbm
B. Frequency Response			
0.5 Kc			<u>-25</u> dbm
1 Kc			<u>-25</u> dbm
1.5 Kc		-2 db + 1 db From 1 Kc Reference Level	<u>-25</u> dbm
2 Kc			<u>-25</u> dbm
2.5 Kc			<u>-24.9</u> dbm
3 Kc			<u>-25</u> dbm
20 Kc	At least 12 db below Reference		<u>-71</u> dbm
4. INTERMODULATION DISTORTION			
A. One MW-503A Link		Minimum Ratio 45 db	<u>* 38</u> db
		* Out of spec.	
5. RECEIVED SIGNAL POWER			
A. Receiver A			<u>-33.2</u> dbm
B. Receiver B			<u>-33.2</u> dbm

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DATA SHEET

MW-503A LOS LINK TEST

STATION G T ATransmission Path: From Station G T A to Station G P A

6. NET PATH LOSS

- A. NPL, Path A 61.2 db
- B. NPL, Path B db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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DATA SHEET

MW-503A LOS LINK TEST

STATION G T A

Transmission Path:

From Station G T A to Station G P A

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)76 db

B. Receiver B

76 dbDATE 14 November 1963TESTER W. J. GraySUPERVISOR S. D. BarrettQUALITY ASSURANCE BoncherGEEIA Ralph S. Kruger

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DATA SHEET

MW-503A LOS LINK TEST

STATION GHO

Transmission Path:

From Station GAGto Station GHO

EXPECTED

ACTUAL

1. DIVERSITY TESTS (ALL CONFIGURATIONS)

A. Pilot Level at A IN terminals of Control Panel	-47 to -53 db	<u>-51.3</u> db
B. Pilot Level at B IN terminals of Control Panel	-47 to -53 db	<u>-52.2</u> db
C. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
D. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
E. Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db	<u>-.2</u> db
F. Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db	<u>-.2</u> db
G. Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db	<u>-49.9</u> db

2. BASEBAND

A. Level, 100 Kc RX	-34 \pm 0.5 db	<u>-34</u> db
(GPA ONLY)	-40 \pm 0.5 db	

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DATA SHEET

MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	<u>N/A</u> db
	60 Kc		<u>-34.3</u> db
	100 Kc		<u>-34</u> db
	200 Kc	⁺ 0.5 db From 100 Kc Reference Level	<u>-33.7</u> db
	350 Kc		<u>-33.8</u> db
	400 Kc		<u>-33.7</u> db
	500 Kc		<u>-33.8</u> db
3.	ORDER WIRE		
A.	Level, 1 Kc RX	-25 ⁺ 1 dbm	<u>-25</u> dbm
B.	Frequency Response		
	0.5 Kc		<u>-24.7</u> dbm
	1 Kc		<u>-25</u> dbm
	1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	<u>-25.2</u> dbm
	2 Kc		<u>-25.2</u> dbm
	2.5 Kc		<u>-25.1</u> dbm
	3 Kc		<u>-25.2</u> dbm
	20 Kc	At least 12 db below Reference	<u>-44</u> dbm
4.	INTERMODULATION DISTORTION		
A.	One MW-503A Link	Minimum Ratio 45 db	<u>48</u> db
5.	RECEIVED SIGNAL POWER		
A.	Receiver A		<u>37.5</u> dbm
B.	Receiver B		<u>37.5</u> dbm

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

STATION GHOTransmission Path: From Station GAG to Station GHO

6. NET PATH LOSS

A. NPL, Path A

{ 66.6 db

B. ~~NPL, Path B~~

{ 66.6 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station GAG to Station GHO

	STATION	<u>GHO</u>
	EXPECTED	ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)76 db

B. Receiver B

76 dbDATE 9 January 1964TESTER Wm S GraySUPERVISOR CW MahlenQUALITY ASSURANCE W. D. GrayGEEIA Ralph L. Krueger

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:		From Station	GPE	to Station	GHO	STATION	GHO
						EXPECTED	ACTUAL
1.	DIVERSITY TESTS (ALL CONFIGURATIONS)						
A.	Pilot Level at A IN terminals of Control Panel						
						-47 to -53 db	<u>-51.7</u> db
B.	Pilot Level at B IN terminals of Control Panel						
						-47 to -53 db	<u>-52.0</u> db
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.						
						-50 \pm 0.25 db	<u>-50.0</u> db
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.						
						-50 \pm 0.25 db	<u>-50.0</u> db
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.						
						\pm 1.0 db	<u>-.2</u> db
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.						
						\pm 1.0 db	<u>-.5</u> db
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).						
						-50 \pm 0.5 db	<u>-49.8</u> db
2.	BASEBAND						
A.	Level, 100 Kc RX						
						-34 \pm 0.5 db	<u>-34.0</u> db
		(GPA ONLY)				-40 \pm 0.5 db	

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DATA SHEET

MW-503A LOS LINK TEST

EXPECTED

ACTUAL

B. Frequency

12 Kc

(GA-GPA Link Only)

N/A db

60 Kc

-34.3 db

100 Kc

-34.0 db

200 Kc

+0.5 db From
100 Kc Reference
Level-33.8 db

350 Kc

-33.9 db

400 Kc

-33.9 db

500 Kc

-34.2 db

3. ORDER WIRE

A. Level, 1 Kc RX

-25 + 1 dbm-25.0 dbm

B. Frequency Response

0.5 Kc

-24.9 dbm

1 Kc

-25.0 dbm

1.5 Kc

-2 db + 1 db
From 1 Kc
Reference Level-25.0 dbm

2 Kc

-25.1 dbm

2.5 Kc

-25.2 dbm

3 Kc

-25.2 dbm

20 Kc

At least 12 db below Reference

-42 dbm

4. INTERMODULATION DISTORTION

A. One MW-503A Link

Minimum Ratio
45 db-47.5 db

5. RECEIVED SIGNAL POWER

A. Receiver A

31.5 dbm

B. Receiver B

31.5 dbm

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

STATION GHOTransmission Path: From Station GPE to Station GHO

6. NET PATH LOSS

A. NPL, Path A

60.4 db

B. NPL, Path B

N/A db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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DATA SHEET

MW-503A LOS LINK TEST

STATION GHOTransmission Path: From Station GPE to Station GHO

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)76 db

B. Receiver B

76 dbDATE 8-10 January 1964TESTER W. S. [Signature]SUPERVISOR W. M. [Signature]QUALITY ASSURANCE W. C. [Signature]GEEIA Ralph [Signature]

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DATA SHEET

MW-503A LOS LINK TEST

STATION GAG

Transmission Path:

From Station GAGto Station GHO

EXPECTED

ACTUAL

1. DIVERSITY TESTS (ALL CONFIGURATIONS)

A. Pilot Level at A IN terminals of Control Panel	-47 to -53 db	<u>-52</u> db
B. Pilot Level at B IN terminals of Control Panel	-47 to -53 db	<u>-52.5</u> db
C. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
D. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
E. Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db	<u>+0.5</u> db
F. Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db	<u>+0.5</u> db
G. Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db	<u>-49.75</u> db

2. BASEBAND

A. Level, 100 Kc RX	-34 \pm 0.5 db	<u>-34</u> db
(GPA ONLY)	-40 \pm 0.5 db	

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DATA SHEET

MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	N/A db
	60 Kc		<u>-34.5</u> db
	100 Kc		<u>-34.0</u> db
	200 Kc	± 0.5 db From 100 Kc Reference Level	<u>-34.0</u> db
	350 Kc		<u>-34.0</u> db
	400 Kc		<u>-34.0</u> db
	500 Kc		<u>-34.0</u> db
3.	ORDER WIRE		
A.	Level, 1 Kc RX	-25 ± 1 dbm	<u>-25.0</u> dbm
B.	Frequency Response		
	0.5 Kc		<u>-25.0</u> dbm
	1 Kc		<u>-25.0</u> dbm
	1.5 Kc	-2 db ± 1 db From 1 Kc Reference Level	<u>-24.6</u> dbm
	2 Kc		<u>-24.7</u> dbm
	2.5 Kc		<u>-24.7</u> dbm
	3 Kc		<u>-24.7</u> dbm
	20 Kc	At least 12 db below Reference	<u>-48.0</u> dbm
4.	INTERMODULATION DISTORTION		
A.	One MW-503A Link	Minimum Ratio 45 db	<u>48</u> db
5.	RECEIVED SIGNAL POWER		
A.	Receiver A		<u>33.7</u> dbm
B.	Receiver B		<u>34.7</u> dbm

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

STATION GAGTransmission Path: From Station GAG to Station GHO

6. NET PATH LOSS

A. NPL, Path A

62.4 db

B. NPL, Path B

~~64.4~~ db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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DATA SHEET

MW-503A LOS LINK TEST

STATION GAG

Transmission Path:

From Station GAGto Station GHO

EXPECTED

ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)76 db

B. Receiver B

76 dbDATE 9 January 1964TESTER James P. PughSUPERVISOR Donald A. PickardQUALITY ASSURANCE William R. H. H.GEEIA Ralph L. Kruger

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

		STATION	
		GPE	GHO
Transmission Path:	From Station	GPE	to Station
		EXPECTED	ACTUAL
1. DIVERSITY TESTS (ALL CONFIGURATIONS)			
A.	Pilot Level at A IN terminals of Control Panel	-47 to -53 db	<u>-52.6db</u>
B.	Pilot Level at B IN terminals of Control Panel	-47 to -53 db	<u>-51.6db</u>
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db	<u>-50 db</u>
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db	<u>-50 db</u>
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db	<u>-50.4 db</u>
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db	<u>-50 db</u>
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db	<u>-50 db</u>
2. BASEBAND			
A.	Level, 100 Kc RX	-34 \pm 0.5 db	<u>-34 db</u>
		(GPA ONLY)	-40 \pm 0.5 db

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MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	N/A db
	60 Kc		-34 db
	100 Kc		-34 db
	200 Kc	± 0.5 db From 100 Kc Reference Level	-33.6 db
	350 Kc		-34 db
	400 Kc		-34 db
	500 Kc		-34 db
3.	ORDER WIRE		
	A. Level, 1 Kc RX	-25 \pm 1 dbm	-25 dbm
	B. Frequency Response		
	0.5 Kc		-26 dbm
	1 Kc		-25 dbm
	1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	24.5 dbm
	2 Kc		24.5 dbm
	2.5 Kc		24.5 dbm
	3 Kc		24.5 dbm
	20 Kc	At least 12 db below Reference	46.5 dbm
4.	INTERMODULATION DISTORTION		
	A. One MW-503A Link	Minimum Ratio 45 db	45.5 db
5.	RECEIVED SIGNAL POWER		
	A. Receiver A		32.2 db m
	B. Receiver B		32.2 dbm

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MW-503A LOS LINK TEST

Transmission Path: From Station GPE to Station GHO

6. NET PATH LOSS

A. NPL, Path A

61.6 db

B. NPL, Path B

61.6 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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MW-503A LOS LINK TEST

Transmission Path: From Station GPE to Station GHO

STATION GPE

GHO

EXPECTED

ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)

76 db

B. Receiver B

76 dbDATE 10 Jan 64TESTER Robert AllenSUPERVISOR George C. McQUALITY ASSURANCE William R. MayGEEIA Ralph L. Kruger

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DATA SHEET

MW-503A LOS LINK TEST

STATION TID

Transmission Path:

From Station TIDto Station TIC

EXPECTED ACTUAL

1. DIVERSITY TESTS (ALL CONFIGURATIONS)

A. Pilot Level at A IN terminals of Control Panel	-47 to -53 db	<u>-51.0</u> db
B. Pilot Level at B IN terminals of Control Panel	-47 to -53 db	<u>-51.6</u> db
C. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
D. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
E. Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db	<u>-50.4</u> db
F. Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db	<u>-50.3</u> db
G. Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db	<u>-50</u> db

2. BASEBAND

A. Level, 100 Kc RX	-34 \pm 0.5 db	<u>-34</u> db
(GPA ONLY)	-40 \pm 0.5 db	

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MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	<u> N/A </u> db
	60 Kc		<u>-34.5</u> db
	100 Kc		<u>-34</u> db
	200 Kc	± 0.5 db From 100 Kc Reference Level	<u>-33.5</u> db
	350 Kc		<u>-33.5</u> db
	400 Kc		<u>-33.5</u> db
	500 Kc		<u>-33.5</u> db
3.	ORDER WIRE		
A.	Level, 1 Kc RX	-25 ± 1 dbm	<u>-25</u> dbm
B.	Frequency Response		
	0.5 Kc		<u>-25.7</u> dbm
	1 Kc		<u>-25</u> dbm
	1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	<u>-24.8</u> dbm
	2 Kc		<u>-24.7</u> dbm
	2.5 Kc		<u>-24.7</u> dbm
	3 Kc		<u>-24.7</u> dbm
	20 Kc	At least 12 db below Reference	<u>-52</u> dbm
4.	INTERMODULATION DISTORTION		
A.	One MW-503A Link	Minimum Ratio 45 db	<u>48</u> db
5.	RECEIVED SIGNAL POWER		
A.	Receiver A		<u>-32.7</u> dbm
B.	Receiver B		<u>-32.7</u> dbm

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MW-503A LOS LINK TEST

STATION T.I.D.Transmission Path: From Station T.I.D. to Station T.I.C.

6. NET PATH LOSS

A. NPL, Path A

61 db

B. NPL, Path B

N/A db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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MW-503A LOS LINK TEST

Transmission Path:

From Station T.I.D. to Station T.I.C.STATION T.I.D.

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)76 db

B. Receiver B

76 dbDATE 29, Nov. 1963TESTER J. H. ThielSUPERVISOR Russell E. CarterQUALITY ASSURANCE Patrick HuntGEEIA Ralph D. Bringer

AFCS _____

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DATA SHEET

MW-503A LOS LINK TEST

STATION TIC

Transmission Path:

From Station TICto Station TID

EXPECTED

ACTUAL

1. DIVERSITY TESTS (ALL CONFIGURATIONS)

A. Pilot Level at A IN terminals of Control Panel	-47 to -53 db	<u>-52.5</u> db
B. Pilot Level at B IN terminals of Control Panel	-47 to -53 db	<u>-52.5</u> db
C. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db	<u>-50.0</u> db
D. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db	<u>-50.0</u> db
E. Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db	<u>-0.5</u> db
F. Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db	<u>-0.4</u> db
G. Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db	<u>-50.0</u> db

2. BASEBAND

A. Level, 100 Kc RX	-34 \pm 0.5 db	<u>-34.0</u> db
(GPA ONLY)	-40 \pm 0.5 db	

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DATA SHEET

MW-503A LOS LINK TEST

EXPECTED

ACTUAL

B. Frequency

12 Kc (GA-GPA Link Only)

60 Kc

100 Kc

200 Kc

350 Kc

400 Kc

500 Kc

± 0.5 db From
100 Kc Reference
Level

N/A db

-34.2 db

-34.0 db

-33.7 db

-33.8 db

-33.8 db

-34.0 db

3. ORDER WIRE

A. Level, 1 Kc RX

-25 ± 1 dbm

-25.0 dbm

B. Frequency Response

0.5 Kc

1 Kc

1.5 Kc

-2 db + 1 db
From 1 Kc
Reference Level

-25.1 dbm

-25.0 dbm

2 Kc

2.5 Kc

3 Kc

20 Kc

At least 12 db below Reference

-24.6 dbm

-24.5 dbm

-24.5 dbm

-24.5 dbm

-44.0 dbm

AT 710

4. INTERMODULATION DISTORTION

A. One MW-503A Link

Minimum Ratio
45 db

A"TX B"TX
45.5 47.0 db

5. RECEIVED SIGNAL POWER

A. Receiver A

-34.6 dbm

B. Receiver B

-34.6 dbm

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DATA SHEET

MW-503A LOS LINK TEST

STATION TIC

Transmission Path: From Station TIC to Station TID

6. NET PATH LOSS

A. NPL, Path A

64.5 db

B. NPL, Path B

64.5 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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DATA SHEET

MW-503A LOS LINK TEST

STATION TIC

Transmission Path:

From Station TIC

to Station TID

EXPECTED

ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)

73.0 db

B. Receiver B

73.5 db

DATE 28 November 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEIA [Signature]

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:	From Station	TKG	to Station	STATION	TKG
				TAL	
				EXPECTED	ACTUAL
1. DIVERSITY TESTS (ALL CONFIGURATIONS)					
A. Pilot Level at A IN terminals of Control Panel				-47 to -53 db	<u>-52.8</u> db
B. Pilot Level at B IN terminals of Control Panel				-47 to -53 db	<u>-52.1</u> db
C. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.				-50 \pm 0.25 db	<u>-50.0</u> db
D. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.				-50 \pm 0.25 db	<u>-50.0</u> db
E. Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.				\pm 1.0 db	<u>-0.7</u> db
F. Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.				\pm 1.0 db	<u>-0.2</u> db
G. Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).				-50 \pm 0.5 db	<u>-50.2</u> db
2. BASEBAND					
A. Level, 100 Kc RX				-34 \pm 0.5 db	<u>-34.1</u> db
	(GPA ONLY)			-40 \pm 0.5 db	

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DATA SHEET

MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	N/A db
	60 Kc		<u>-34.3db</u>
	100 Kc		<u>-34.1db</u>
	200 Kc	± 0.5 db From 100 Kc Reference Level	<u>-33.9db</u>
	350 Kc		<u>-34.1db</u>
	400 Kc		<u>-34.0db</u>
	500 Kc		<u>-34.1db</u>
3.	ORDER WIRE		
A.	Level, 1 Kc RX	-25 ± 1 dbm	<u>-25.0dbm</u>
B.	Frequency Response		
	0.5 Kc		<u>-26.0dbm</u>
	1 Kc		<u>-25.0dbm</u>
	1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	<u>-24.8dbm</u>
	2 Kc		<u>-24.8dbm</u>
	2.5 Kc		<u>-24.7dbm</u>
	3 Kc		<u>-24.7dbm</u>
	20 Kc	At least 12 db below Reference	<u>-50.0dbm</u>
4.	INTERMODULATION DISTORTION		
A.	One MW-503A Link	Minimum Ratio 45 db TAL $\begin{cases} \text{"A"} \\ \text{"B"} \end{cases}$	$\begin{cases} -45.1\text{db} \\ -45.0\text{db} \end{cases}$
5.	RECEIVED SIGNAL POWER		
A.	Receiver A		<u>-49.4dbm</u>
B.	Receiver B		<u>-50.6dbm</u>

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station TKG to Station TAL

6. NET PATH LOSS

A. NPL, Path A 78.5 db
B. NPL, Path B 79.6 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

NOTE: During NPL check heavy rain noted at site TAL, time 1445, 12-13-63.

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station TKG to Station TAL

	STATION <u>TKG</u>	STATION <u>TAL</u>	EXPECTED	ACTUAL
7. SIGNAL-TO-NOISE RATIO				
A. Receiver A				66.0 db
B. Receiver B				64.0 db

(Refer to FIG. 9 of this procedure for the expected results.)

DATE 13 December 1963TESTER J. H. T. S.SUPERVISOR William R. BurbridgeQUALITY ASSURANCE Joseph M. MalboisGEEIA Richard A. Nelson

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MW-503A LOS LINK TEST

Transmission Path:		From Station	TKG	to Station	TKA	STATION	TKG
						EXPECTED	ACTUAL
1. DIVERSITY TESTS (ALL CONFIGURATIONS)							
A.	Pilot Level at A IN terminals of Control Panel	-47 to -53 db				-52.6 db	
B.	Pilot Level at B IN terminals of Control Panel	-47 to -53 db				-51.3 db	
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db				-50 db	
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db				-50 db	
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db				40.5 db	
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db				40.25 db	
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db				N/A db	
2. BASEBAND							
A.	Level, 100 Kc RX	-34 \pm 0.5 db				-34.0 db	
	(GPA ONLY)	-40 \pm 0.5 db					

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DATA SHEET

MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	<u>N/A</u> db
	60 Kc		<u>-34.5</u> db
	100 Kc		<u>-34.0</u> db
	200 Kc	⁺ 0.5 db From 100 Kc Reference Level	<u>-34.0</u> db
	350 Kc		<u>-34.0</u> db
	400 Kc		<u>-33.8</u> db
	500 Kc		<u>-33.9</u> db
3.	ORDER WIRE		
A.	Level, 1 Kc RX	-25 ⁺ 1 dbm	<u>-25.0</u> dbm
B.	Frequency Response		
	0.5 Kc		<u>-25.8</u> dbm
	1 Kc		<u>-25.0</u> dbm
	1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	<u>-24.9</u> dbm
	2 Kc		<u>-24.8</u> dbm
	2.5 Kc		<u>-24.8</u> dbm
	3 Kc		<u>-24.8</u> dbm
	20 Kc	At least 12 db below Reference	<u>-64.0</u> dbm
4.	INTERMODULATION DISTORTION		
A.	One MW-503A Link	Minimum Ratio 45 db	<u>45.2</u> db
5.	RECEIVED SIGNAL POWER		
A.	Receiver A		<u>-52.1</u> dbm
B.	Receiver B		<u>-47.6</u> dbm

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MW-503A LOS LINK TEST

STATION TKGTransmission Path: From Station TKG to Station TKA

6. NET PATH LOSS

- A. NPL, Path A -80.9_db
- B. NPL, Path B -77.7_db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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MW-503A LOS LINK TEST

Transmission Path:

From Station TKG

STATION TKG

to Station TKA

EXPECTED

ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)

-62.0db

B. Receiver B

-66.0db

DATE 25 OCTOBER 1963

TESTER J. D. J. J. J.

SUPERVISOR William A. K. K. K.

QUALITY ASSURANCE M. B. B. B.

GEEIA Ralph S. S. S.

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:	From Station	TAL	to Station	STATION	TAL
				TKG	
				EXPECTED	ACTUAL
1. DIVERSITY TESTS (ALL CONFIGURATIONS)					
A. Pilot Level at A IN terminals of Control Panel				-47 to -53 db	<u>-52</u> db
B. Pilot Level at B IN terminals of Control Panel				-47 to -53 db	<u>-52</u> db
C. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.				-50 \pm 0.25 db	<u>-50</u> db
D. Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.				-50 \pm 0.25 db	<u>-50</u> db
E. Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.				\pm 1.0 db	<u>-50</u> db
F. Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.				\pm 1.0 db	<u>-50</u> db
G. Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).				-50 \pm 0.5 db	<u>-50</u> db
2. BASEBAND					
A. Level, 100 Kc RX				-34 \pm 0.5 db	<u>-34</u> db
	(GPA ONLY)			-40 \pm 0.5 db	

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MW-503A LOS LINK TEST

B. Frequency	EXPECTED	ACTUAL
12 Kc	(GA-GPA Link Only)	N/A db
60 Kc		-34.2 db
100 Kc		-34 db
200 Kc	+0.5 db From 100 Kc Reference Level	-33.7 db
350 Kc		-33.9 db
400 Kc		-33.9 db
500 Kc		-34 db

3. ORDER WIRE

A. Level, 1 Kc RX	-25 \pm 1 dbm	-25 dbm
-------------------	-----------------	---------

B. Frequency Response

0.5 Kc		-25.2 dbm
1 Kc		-25 dbm
1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	-25 dbm
2 Kc		-25 dbm
2.5 Kc		-25 dbm
3 Kc		-25 dbm
20 Kc	At least 12 db below Reference	-43 dbm

4. INTERMODULATION DISTORTION

A. One MW-503A Link

Minimum Ratio
45 db

16 db

5. RECEIVED SIGNAL POWER

A. Receiver A

47.2 dbm

B. Receiver B

48.2 dbm

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station TAL to Station TKG

6. NET PATH LOSS

A. NPL, Path A

75 db

B. NPL, Path B

71 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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DATA SHEET

MW-503A LOS LINK TEST

STATION _____ TAL _____

Transmission Path: From Station _____ TAL _____ to Station _____ TKG _____

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A	(Refer to FIG. 9 of this procedure for the expected results.)	<u>73</u> db
B. Receiver B		<u>72</u> db

DATE 13 DECEMBER, 1963

TESTER Cap. J. L. J.

SUPERVISOR Donald E. Mize

QUALITY ASSURANCE J. H. Mize

GEEIA Ralph S. Kruger

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:		From Station	TKA	to Station	TKG
		EXPECTED		ACTUAL	
1. DIVERSITY TESTS (ALL CONFIGURATIONS)					
A.	Pilot Level at A IN terminals of Control Panel	-47 to -53 db	50	-50	db
B.	Pilot Level at B IN terminals of Control Panel	-47 to -53 db	79.5	-49.5	db
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db	50	-50	db
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db	50	-50	db
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db	50	0	db
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db	50	0	db
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db	N/A		db
2. BASEBAND					
A.	Level, 100 Kc RX	-34 \pm 0.5 db	-44		db
	(GPA ONLY)	-40 \pm 0.5 db			
	(TKA ONLY)	-44 \pm 0.5 db			

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

EXPECTED

ACTUAL

B. Frequency

12 Kc

(GA-GPA Link Only)

N/A db

60 Kc

-44 db

100 Kc

-44 db

200 Kc

 ± 0.5 db From
100 Kc Reference
Level
-44 db

350 Kc

-44 db

400 Kc

-43.8 db

500 Kc

-43.9 db

3. ORDER WIRE

A. Level, 1 Kc RX

 -25 ± 1 dbm-25 dbm

B. Frequency Response

0.5 Kc

-26 dbm

1 Kc

-25 dbm

1.5 Kc

 -2 db + 1 db
From 1 Kc
Reference Level
-25 dbm

2 Kc

-24.6 dbm

2.5 Kc

-24.6 dbm

3 Kc

-24.3 dbm

20 Kc

At least 12 db below Reference

-42 dbm

4. INTERMODULATION DISTORTION

A. One MW-503A Link

 Minimum Ratio
45 db
45 db

5. RECEIVED SIGNAL POWER

A. Receiver A

46.1 dbm

B. Receiver B

54.5 dbm

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
MW-503A LOS LINK TEST

BR II/85 Rev.

STATION TKA

Transmission Path: From Station TKA to Station TKB

6. NET PATH LOSS

A. NPL, Path A

776 db

B. NPL, Path B

75.75.4 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

FEDERAL ELECTRIC CORPORATION

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DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:

From Station TKA to Station TKGSTATION TKA

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A

(Refer to FIG. 9 of
this procedure for the
expected results.)70 db

B. Receiver B

69 dbDATE 21. OCTOBER, 1963TESTER James H. LongmanSUPERVISOR Raymond K. [unclear]QUALITY ASSURANCE J. M. [unclear]GEEIA Ralph S. Kruger

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FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

		STATION	
		TKA	
Transmission Path:	From Station	TKA	to Station
			TKR
		EXPECTED	ACTUAL
1. DIVERSITY TESTS (ALL CONFIGURATIONS)			
A.	Pilot Level at A IN terminals of Control Panel	-47 to -53 db	<u>-50.7</u> db
B.	Pilot Level at B IN terminals of Control Panel	-47 to -53 db	<u>-50.1</u> db
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db	<u>-50</u> db
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db	<u>.1</u> db
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db	<u>.1</u> db
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db	<u>-50</u> db
2. BASEBAND			
A.	Level, 100 Kc RX	-34 \pm 0.5 db	<u>-44</u> db
	(GPA ONLY)	-40 \pm 0.5 db	
	(TKA ONLY)	40 -44 \pm 0.5 db	

FEDERAL ELECTRIC CORPORATION

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BIG BALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	N/A db
	60 Kc		-44.7 db
	100 Kc		-44.2 db
	200 Kc	+0.5 db From 100 Kc Reference Level	-44.7 db
	350 Kc		-44 db
	400 Kc		-44 db
	500 Kc		-44.2 db
3.	ORDER WIRE		
A.	Level, 1 Kc RX	-25 \pm 1 dbm	-25 dbm
B.	Frequency Response		
	0.5 Kc		-25.5 dbm
	1 Kc		-25 dbm
	1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	-24.8 dbm
	2 Kc		-24.5 dbm
	2.5 Kc		-24.8 dbm
	3 Kc		-24.6 dbm
	20 Kc	At least 12 db below Reference	-65.5 dbm
4.	INTERMODULATION DISTORTION		
A.	One MW-503A Link	Minimum Ratio 45 db	46 db
5.	RECEIVED SIGNAL POWER		
A.	Receiver A		40.5 dbm
B.	Receiver B		46.5 dbm

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FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

STATION TKATransmission Path: From Station TKA to Station TKR

6. NET PATH LOSS

A. NPL, Path A

70.3 db

B. NPL, Path B

76.3 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station TKA to Station TKR

STATION TKA

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A (Refer to FIG. 9 of this procedure for the expected results.) 73 db

B. Receiver B 72 db

DATE 21 OCTOBER, 1963TESTER James H. [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE [Signature]GEEIA Ralph L. [Signature]

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:		From Station	TKR	to Station	TKA
		EXPECTED		ACTUAL	
1. DIVERSITY TESTS (ALL CONFIGURATIONS)					
A.	Pilot Level at A IN terminals of Control Panel	-47 to -53 db		<u>-51.5 db</u>	
B.	Pilot Level at B IN terminals of Control Panel	-47 to -53 db		<u>-52.0 db</u>	
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.	-50 \pm 0.25 db		<u>-50.0 db</u>	
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.	-50 \pm 0.25 db		<u>-50.0 db</u>	
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.	\pm 1.0 db		<u>\pm0.2 db</u>	
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.	\pm 1.0 db		<u>\pm0.2 db</u>	
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).	-50 \pm 0.5 db		<u>-50.0 db</u>	
2. BASEBAND					
A.	Level, 100 Kc RX	-34 \pm 0.5 db		<u>-34.0 db</u>	
	(GPA ONLY)	-40 \pm 0.5 db			

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

EXPECTED

ACTUAL

B. Frequency

12 Kc

(GA-GPA Link Only)

N/A db

60 Kc

-34.5 db

100 Kc

-34.0 db

200 Kc

 $+0.5$ db From
100 Kc Reference
Level
-34.0 db

350 Kc

-34.3db

400 Kc

-34.2db

500 Kc

-34.5db

3. ORDER WIRE

A. Level, 1 Kc RX

 -25 ± 1 dbm-25.0dbm

B. Frequency Response

0.5 Kc

-25.5dbm

1 Kc

-25.0dbm

1.5 Kc

 -2 db + 1 db
From 1 Kc
Reference Level
-24.6dbm

2 Kc

-24.3 dbm

2.5 Kc

-24.3 dbm

3 Kc

-24.2 dbm

20 Kc

At least 12 db below Reference

-50.0 dbm

4. INTERMODULATION DISTORTION

A. One MW-503A Link

 Minimum Ratio
45 db
46.0 db

5. RECEIVED SIGNAL POWER

A. Receiver A

-41.4 dbm

B. Receiver B

-39.3 dbm

FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

STATION TKRTransmission Path: From Station TKR to Station TKA

6. NET PATH LOSS

A. NPL, Path A

70.8 db

B. NPL, Path B

67.9 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station TKR to Station TKA

	STATION	TKR
	EXPECTED	ACTUAL
7. SIGNAL-TO-NOISE RATIO		
A. Receiver A	(Refer to FIG. 9 of this procedure for the expected results.)	<u>71.0</u> db
B. Receiver B		<u>72.0</u> db

DATE 23 OCTOBER 1963TESTER Raymond J. AndersonSUPERVISOR Raymond J. AndersonQUALITY ASSURANCE Stanley W. MillerGEEIA Ralph S. Kruger

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:		From Station	TKR	to Station	TKR	EXPECTED	ACTUAL
					TIZ		
1. DIVERSITY TESTS (ALL CONFIGURATIONS)							
A.	Pilot Level at A IN terminals of Control Panel					-47 to -53 db	<u>-52.1</u> db
B.	Pilot Level at B IN terminals of Control Panel					-47 to -53 db	<u>-51.5</u> db
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.					-50 \pm 0.25 db	<u>-50.1</u> db
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.					-50 \pm 0.25 db	<u>-50.0</u> db
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.					\pm 1.0 db	<u>-0.60</u> db
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.					\pm 1.0 db	<u>-0.40</u> db
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).					-50 \pm 0.5 db	<u>-50.2</u> db
2. BASEBAND							
A.	Level, 100 Kc RX					-34 \pm 0.5 db	<u>-31.2</u> db
	(GPA ONLY)					-40 \pm 0.5 db	

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	N/A db
	60 Kc		-34.5 db
	100 Kc		-34.2 db
	200 Kc	+0.5 db From 100 Kc Reference Level	-34.0 db
	350 Kc		-34.2 db
	400 Kc		-34.0 db
	500 Kc		-34.2 db

3. ORDER WIRE

A.	Level, 1 Kc RX	-25 \pm 1 dbm	-25.0 dbm
----	----------------	-----------------	-----------

B. Frequency Response

0.5 Kc		-25.4 dbm
1 Kc		-25.1 dbm
1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	-25.1 dbm
2 Kc		-25.1 dbm
2.5 Kc		-25.0 dbm
3 Kc		-24.9 dbm
20 Kc	At least 12 db below Reference	-56.5 dbm

4. INTERMODULATION DISTORTION

A. One MW-503A Link

Minimum Ratio
45 db

46 db

5. RECEIVED SIGNAL POWER

A. Receiver A

-37.2 dbm

B. Receiver B

-39.4 dbm

FEDERAL ELECTRIC CORPORATION

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BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

STATION TKR Transmission Path: From Station TKR to Station TIR

6. NET PATH LOSS

A. NPL, Path A

67.0 db

B. NPL, Path B

68.5 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

NOTE: The NPL test was performed on ¹¹ November time ¹¹⁰⁰ ~~1200~~, and on
12 November time 1210. Readings on both days were the same.

FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station TKR to Station TIZ

STATION TKR

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A (Refer to FIG. 9 of (AGC=2.2vdc) 76.0 db
this procedure for the
expected results.)

B. Receiver B (AGC=2.0vdc) 77.0 db

DATE 12 NOVEMBER 1963TESTER *A. H. J.*SUPERVISOR *A. H. J.*QUALITY ASSURANCE *J. M. B.*GEEIA VERIFIED 11/12/63

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path:		From Station	STATION	to Station	EXPECTED	ACTUAL
			TIZ	TKR		
1. DIVERSITY TESTS (ALL CONFIGURATIONS)						
A.	Pilot Level at A IN terminals of Control Panel				-47 to -53 db	-51.5 db
B.	Pilot Level at B IN terminals of Control Panel				-47 to -53 db	-51.0 db
C.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in A-DISABLE position.				-50 \pm 0.25 db	-50.0 db
D.	Pilot Level at SIG OUT terminals of Control Panel with SERVICE SWITCH in B-DISABLE position.				-50 \pm 0.25 db	-50.0 db
E.	Stabilized Pilot Level change at SIG OUT terminals of control panel with "A" power off.				\pm 1.0 db	-0.25 db
F.	Stabilized Pilot Level change at SIG OUT terminals of Control Panel with "B" power off.				\pm 1.0 db	-0.5 db
G.	Pilot Level at SIG OUT terminals with distant transmitter TX B on the air (Space Diversity and Hot-Standby configurations only).				-50 \pm 0.5 db	-50 db
2. BASEBAND						
A.	Level, 100 Kc RX				-34 \pm 0.5 db	-34.0 db
	(GPA ONLY)				-40 \pm 0.5 db	

FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

		EXPECTED	ACTUAL
B.	Frequency		
	12 Kc	(GA-GPA Link Only)	<u>N/A</u> db
	60 Kc		<u>-34.3</u> db
	100 Kc		<u>-34.0</u> db
	200 Kc	⁺ 0.5 db From 100 Kc Reference Level	<u>-33.9</u> db
	350 Kc		<u>-34.0</u> db
	400 Kc		<u>-34.0</u> db
	500 Kc		<u>-34.2</u> db
3.	ORDER WIRE		
A.	Level, 1 Kc RX	-25 ⁺ 1 dbm	<u>-25.0</u> dbm
B.	Frequency Response		
	0.5 Kc		<u>-24.8</u> dbm
	1 Kc		<u>-25.0</u> dbm
	1.5 Kc	-2 db + 1 db From 1 Kc Reference Level	<u>-24.8</u> dbm
	2 Kc		<u>-24.8</u> dbm
	2.5 Kc		<u>-24.8</u> dbm
	3 Kc		<u>-24.8</u> dbm
	20 Kc	At least 12 db below Reference	<u>-50.0</u> dbm
4.	INTERMODULATION DISTORTION		
A.	One MW-503A Link	Minimum Ratio	
	** THIS TEST NOT VERIFIED BY GHEIA DUE TO LACK OF TEST EQUIPMENT.		<u>16</u> db **
5.	RECEIVED SIGNAL POWER		
A.	Receiver A		<u>-35.5</u> dbm
B.	Receiver B		<u>-35.6</u> dbm

FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

STATION TIZTransmission Path: From Station TIZ to Station TKR

6. NET PATH LOSS

A. NPL, Path A

66.3 db

B. NPL, Path B

66.4 db

- C. Discussion - The Net Path Loss (NPL) in this procedure, consists of both fixed and variable losses and fixed gains. The fixed losses are transmission line losses; that is, inherent waveguide attenuation and connector discontinuities. The variable loss is the actual transmission path loss, although relatively constant, it is effected by seasonal changes. It should be noted, however, that short term variations, much greater than the mean, will be experienced during abnormal atmospheric conditions. The fixed gains are the sum of the gains of transmitting and receiving antennas. Since the NPL is relatively constant, except as noted, it can be used as a future guide to antenna orientation and transmission line condition.

FEDERAL ELECTRIC CORPORATION

BR II/85 Rev.

BIG RALLY II PROJECT

DATA SHEET

MW-503A LOS LINK TEST

Transmission Path: From Station TIZ to Station TKR

STATION TIZ

EXPECTED ACTUAL

7. SIGNAL-TO-NOISE RATIO

A. Receiver A (Refer to FIG. 9 of this procedure for the expected results.) -75 db

B. Receiver B -75 db

DATE 12 NOVEMBER 1953

TESTER James P. Graham

SUPERVISOR R. L. ...

QUALITY ASSURANCE W. H. ...

GEEIA S. P. ...

FEDERAL ELECTRIC CORPORATION

BRH/31

BIG RALLY II PROJECT

DATA SHEET

AN/TRC-35 STATION

STATION GKTransmission Path: From Station GK to Station GARTransmitter Serial No. #1 392, #2 3557Assigned Frequency 246.5 MC

Transmitter, T302/TRC

EXPECTED

ACTUAL
XMTG#1 XMTG#2

1. FREQUENCY

 $\pm .002\%$ of assigned 246.498365 MC 246.50 MC

2. POWER OUTPUT

Minimum 50 Watts

80 Watts 83 Watts

3. AUTOMATIC FREQUENCY CONTROL

RSK RSK Initials

4. LOW POWER ALARM

Maximum 30 Watts

28 Watts 28 Watts

RF Output Power

DATE 17 January 1964TESTER B. GraySUPERVISOR J. R. GledhillQUALITY ASSURANCE HandwrittenGEEIA Handwritten

Sheet 1 of 1

FEDERAL ELECTRIC CORPORATION

BRH/31

BIG RALLY II PROJECT

DATA SHEET

AN/TRC-35 STATION

STATION GARTransmission Path: From Station GAR to Station GKTransmitter Serial No. #1 2278, #2 375Assigned Frequency 235.5 MC

Transmitter, T302/TRC

EXPECTED

ACTUAL
XMTG#1 XMTG#2

- | | | | | |
|--------------------------------|--------------|--------------------------|-----------------------|---------------------|
| 1. FREQUENCY | <u>*4710</u> | $\pm .002\%$ of assigned | <u>235.496.058</u> MC | <u>235.493</u> MC |
| 2. POWER OUTPUT | | Minimum 50 Watts | <u>60</u> Watts | <u>60</u> Watts |
| 3. AUTOMATIC FREQUENCY CONTROL | | | <u>RSK</u> | <u>RSK</u> Initials |
| 4. LOW POWER ALARM | | Maximum 30 Watts | <u>28</u> Watts | <u>28</u> Watts |
| RF Output Power | | | | |

DATE 15 January 1964TESTER J.B. BarlettSUPERVISOR J.F. HaywardQUALITY ASSURANCE M. CanofGen. Ralph S. Meyer

Sheet 1 of 1

FEDERAL ELECTRIC CORPORATION

BR11/32

BIG RALLY II PROJECT

DATA SHEET

AN/TRC-35 STATION

STATION GKTransmission Path: From Station GK to Station GARReceiver Serial No. #1 2278, #2 2286

RECEIVER, R-417/TRC (TRC-35)

EXPECTED

ACTUAL

REC#1

REC#2

1. SQUELCH (SENSITIVITY)

Measure meter reading (C)	approximately 30 μ a	<u>30</u> μ a	<u>30</u> μ a
Measure meter reading (H)		<u>20</u> μ a	<u>20</u> μ a
Input Signal Level	Max 250 μ v	<u>108</u> μ v	<u>160</u> μ v

2. BANDWIDTH

Lower limit	236.034000 kc	<u>235.866</u> kc ¹⁶⁷
Upper limit	235.478.000 kc	<u>235.428</u> kc ⁶⁹⁵
Bandwidth	540kc \pm 25 kc	<u>556.000</u> kc <u>537.572</u> kc

DATE 17 January 1964TESTER B. G. R. D.SUPERVISOR J. R. AndersonQUALITY ASSURANCE W. C. ConroyGEEIA W. C. Conroy

Sheet 1 of 1

FEDERAL ELECTRIC CORPORATION

BR11/32

BIG RALLY II PROJECT

DATA SHEET

AN/TRC-35 STATION

STATION

GAR

Transmission Path: From Station GAR to Station GKReceiver Serial No. #1 229, #2 177

RECEIVER, R-417/TRC (TRC-35)

EXPECTED

ACTUAL

REC#1

REC#2

1. SQUELCH (SENSITIVITY)

Measure meter reading (C) approximately 30 μ a

30

 μ a

30

 μ a

6

 μ a

6

 μ a

Measure meter reading (H)

250

 μ v

250

 μ v

Input Signal Level

Max 250 μ v μ v μ v

2. BANDWIDTH

Lower limit

200

kc

265

kc

350

kc

300

kc

Upper limit

550

kc

565

kc

Bandwidth

540kc \pm 25 kc

kc

kc

15 January 1964

DATE

TESTER

SUPERVISOR

QUALITY ASSURANCE

Sheet 1 of 1

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FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/TRC-35 OVERALL TEST

BRH/33

STATION GK

Transmission Path: From Station GK to Station GAR

1. R.F. DEVIATION AND BASEBAND GAIN
 Deleted by Errata sheet, dated 23 September 1963
 EXPECTED

Signal level (Step D)
 Signal level (Step I)
 Receiver output (Step F)
 Receiver output (Step K)

-6 dbm
 0dbm +0.5dbm

ACTUAL
 XMTG-REC#1 XMTG-REC#2

_____	_____
_____ μ V	_____ μ V
_____ μ V	_____ μ V
_____ dbm	_____ dbm
_____ dbm	_____ dbm

2. BASEBAND FREQUENCY RESPONSE

FREQUENCY EXPECTED

H. P. 200CD

8KC
 16KC
 32KC
 48KC
 68KC
 90KC

Within ± 1 db
 of the 8 KC
 level

At least 35db from
 8 KC level

ACTUAL
 XMTG-REC#1 XMTG-REC#2

_____	_____
_____ dbm	_____ dbm
_____ dbm	_____ dbm
_____ dbm	_____ dbm
_____ dbm	_____ dbm
_____ dbm	_____ dbm
_____ dbm	_____ dbm

3. ANTENNA VSWR

EXPECTED

ACTUAL

Transmit Antenna Current

Forward	Minimum	30 μ a
Reflected	Maximum	10 μ a

30	μ a
2	μ a

Receive Antenna Current

Forward	Minimum	30 μ a
Reflected	Maximum	10 μ a

32	μ a
2	μ a

DATE 17 January 1964

TESTER B. WREY

SUPERVISOR J. R. Gaddis

QUALITY ASSURANCE W. W. King

GEEIA

Sheet 1 of 1

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FEDERAL ELECTRIC CORPORATION

BR11/33

BIG RALLY II PROJECT

DATA SHEET

AN/TRC-35 OVERALL TEST

STATION GARTransmission Path: From Station GAR to Station GK

1. R.F. DEVIATION AND BASEBAND GAIN - See Revised BR11/34
 Deleted by Errata Sheet-23 Sept-1963 Section 9.1 of the Test procedure.

EXPECTED

ACTUAL

XMTG-REC#1

XMTG-REC#2

Signal level (Step D)

Signal level (Step I)

Receiver output (Step F)

Receiver output (Step K)

-6 dbm

0dbm +0.5dbm

 μ V μ V dbm dbm μ V μ V dbm dbm

2. BASEBAND FREQUENCY RESPONSE

FREQUENCY

EXPECTED

ACTUAL

XMTG-REC#1

XMTG-REC#2

H. P. 200CD

8KC

16KC

32KC

48KC

68KC

90KC

Within ± 1 db
of the 8 KC
levelAt least 35db from
8 KC level dbm dbm dbm dbm dbm dbm dbm dbm dbm dbm dbm dbm

3. ANTENNA VSWR

EXPECTED

ACTUAL

Transmit Antenna Current

Forward Minimum 30 μ aReflected Maximum 10 μ a3010 μ a μ a

Receive Antenna Current

Forward Minimum 30 μ aReflected Maximum 10 μ a3010 μ a μ aDATE 15 January 1964TESTER J. B. BennettSUPERVISOR F. H. YonkersQUALITY ASSURANCE W. L. [unclear]

Sheet 1 of 1

GEEIA Ralph S. Meeger

**FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/TRC-35 LINK TESTS**

BR II/34

STATION GK

Transmission Path: From GAR to GK

1) Deviation

- a) MTR CAL, TX
- b) 1 KC ADJ, TX
- c) MOD ADJ, TX
- d) TEST OSC ADJ, TCC-3
- e) MOD 1 KC IN, TX
- f) MTR CAL, RX
- g) 1 KC OUT, RX, LINK

SYS #1

RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT

SYS #2

RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT

2) Baseband Frequency Response EXPECTED REC #1

TCC-3 TX (1KC) Level	0	dbm
8 KC		-1.4 dbm
16 KC	+ 1 db of	-1.5 dbm
32 KC	8 KC LEVEL	-1.6 dbm
48 KC		-1.9 dbm
68 KC		-2.0 dbm
90 KC	At least 35 db down from 8 KC LEVEL	-2.7 dbm

REC #2

-2.1	dbm
-1.9	dbm
-2.3	dbm
-2.4	dbm
-2.4	dbm
-4.6	dbm

3) Noise Peaks and Spurious Tones

FREQ

 KC

SYS #1

dbm
dbm
dbm
dbm
dbm
dbm

NOISE LEVEL

SYS #2

dbm
dbm
dbm
dbm
dbm
dbm

NOTE * NO NOISE GREATER THAN -60 dbm

NOTE: Record all noise peaks or tones greater than -55 dbm.

DATE 16 JAN. 1964

TESTER B. Grey

SUPV. M. R. Acabogian

QA Marion (Dana)

GEEIA Ralph S. King

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/TRC-35 LINK TESTS

BR II/34

STATION GAR

Transmission Path: From GK to GAR

1) Deviation

SYS #1

SYS #2

- a) MTR CAL, TX
- b) 1 KC ADJ, TX
- c) MOD ADJ, TX
- d) TEST OSC ADJ, TCC-3
- e) MOD 1 KC IN, TX
- f) MTR CAL, RX
- g) 1 KC OUT, RX, LINK

RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT

RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT
RSK	INT

2) Baseband Frequency Response EXPECTED REC #1

REC #2

TCC-3 TX (1KC) Level	0	dbm
8 KC	+2.2	dbm
16 KC	+2.5	dbm
32 KC	+2.5	dbm
48 KC	+2.9	dbm
68 KC	+2.7	dbm
90 KC	-54	dbm

At least 35 db down
from 8 KC LEVEL

-2.1	dbm
-2.0	dbm
-2.2	dbm
-2.2	dbm
-1.7	dbm
-48	dbm

3) Noise Peaks and Spurious Tones

FREQ

NOISE LEVEL

SYS #1

SYS #2

KC	
	Note: No noise above
	-60dbm

dbm	
dbm	
dbm	
dbm	
dbm	

NOTE: Record all noise peaks or tones greater than -55 dbm.

Note: Det. #9, 2140th Comm. Sqd.
S/SGT Robert A. Haberly
monitored levels sent
from Site Gk.
RSK.

DATE 15 January 1964
TESTER [Signature]
SUPV. [Signature]
QA [Signature]
GEEIA [Signature]

GPA

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/21

STATION G P ATransmission Path: From Station G P A to Station G H OTransmitter Serial #1 4022, #2 11123Assigned Frequency 369.5000 MC

Transmitter, T-302/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>369.513</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>72</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>A.A.</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>30</u> watts

TRANSMITTER #2	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>369.513</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>70</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>A.A.</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>30</u> watts

DATE 7 JANUARY 1961TESTER R. H. H. H.SUPERVISOR R. H. H. H.QUALITY ASSURANCE 1.5.4GEEIA
Sheet 1 of 1

6-1

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/21

STATION GHO

Transmission Path: From Station GHO to Station GPA

Transmitter Serial #1 #1422, #2 4242

Assigned Frequency 396.5 MC

Transmitter, T-302/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>396.501.210</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>55</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>RSK</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>28</u> watts

TRANSMITTER #2	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>396,498,750</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>55</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>RSK</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>28</u> watts

DATE 7 January 1961

TESTER Mr. W. W. W.

SUPERVISOR Ed W. Hallen

QUALITY ASSURANCE W. A. C. Jr.

Sheet 1 of 1

GEE TA Ralph H. Hoyer

6-2

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/21

STATION TKG

Transmission Path: From Station TKG to Station TCO

Transmitter Serial #1 4444, #2 707

Assigned Frequency 446.250 MC

Transmitter, T-302/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>446.2491</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>66</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>DB</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>30</u> watts

TRANSMITTER #2	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>446.2491</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>64</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>DB</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>30</u> watts

DATE 10 December 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE Joseph Malbunier

Sheet 6 of 1 [Signature]

BR11/21

Transmission Path: From Station **TKG** to Station **TES**

Assigned Frequency 455.250 MC

Transmitter, T-302/TRC (MRC-80)

ACTUAL

2. POWER OUTPUT	Minimum 50 watts	64	watts
-----------------	------------------	----	-------

3. AUTOMATIC FREQUENCY CONTROL

4. LOW POWER ALARM Maximum 30 watts 29 watts
rf output power

ACTUAL

2. POWER OUTPUT	Minimum 50 watts	69	watts
-----------------	------------------	----	-------

3. AUTOMATIC FREQUENCY CONTROL

4. LOW POWER ALARM Maximum 30 watts 30 watts
rf output power

* OUT OF SPEC.

DATE 15 December 1963

: TESTER

SUPERVISOR

QUALITY ASSURANCE

Sheet 1 of 1

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
ANY/MRC-80 STATION

BR11/21

STATION TCO

Transmission Path: From Station TCO to Station TKG

Transmitter Serial #1 29, #2 30

Assigned Frequency 402.750 MC

Transmitter, T-302/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>402.762</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>75</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>RSK</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>28</u> watts

TRANSMITTER #2	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>402.761</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>67</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>RSK</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>28</u> watts

DATE 10 DEC. 1963

TESTER R. E. Brown

SUPERVISOR K. H. Stoen

QUALITY ASSURANCE W. H. H. H. H.

GEEIA Sheet 1 of 1

Ralph H. H. H.

6-5

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/21

STATION TES

Transmission Path: From Station TES to Station TKG

Transmitter Serial #1 4395, #2 4393

Assigned Frequency 423.75 MC

Transmitter, T-302/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>423.731</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>73</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>MB</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>28</u> watts

TRANSMITTER #2	EXPECTED	ACTUAL
1. FREQUENCY	$\pm .002\%$ of assigned	<u>423.722</u> MC
2. POWER OUTPUT	Minimum 50 watts	<u>75</u> watts
3. AUTOMATIC FREQUENCY CONTROL		<u>MB</u> initials
4. LOW POWER ALARM rf output power	Maximum 30 watts	<u>28</u> watts

DATE 15 December 1963

TESTER Mr. Bueh

SUPERVISOR R. C. Allbeck

QUALITY ASSURANCE Stan Canell

Sheet 1 of GEETA Ralph A. Hugen

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/22

STATION G P A

Transmission Path: From Station G P A to Station G H O

Power Amplifier Serial # 27 & 25

Amplifier Power Supply, AM2066/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>72</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>1000</u> watts
3. GAIN	Minimum 10 db	<u>10 plus</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>85</u> watts
5. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>N/A</u>
End Fire Array	Maximum 1.5	<u>1.65</u>
6. LOW POWER ALARM	3 db down	<u>3</u> db

TRANSMITTER #2	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>70</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>1000</u> watts
3. GAIN	Minimum 10 db	<u>10 plus</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>100</u> watts
5. VSWR		
30 ft. Parabolic	Maximum 1.4	<u>N/A</u>
End Fire Array	Maximum 1.5	<u>1.63</u>
6. LOW POWER ALARM	3 db down	<u>3</u> db

DATE 7 January 1961

TESTER RT. Gibbs

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

Sheet 1 of 1

6-7

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/22

STATION GHO

Transmission Path: From Station GHO to Station GPA

Power Amplifier Serial # 1-24 #2-23

Amplifier Power Supply, AM2066/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>55</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>915</u> watts
3. GAIN	Minimum 10 db	<u>16</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>5</u> watts
5. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>N/A</u>
End Fire Array	Maximum 1.5	<u>1.23</u>
6. LOW POWER ALARM	3 db down	<u>3</u> db

TRANSMITTER #2	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>55</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>1000</u> watts
3. GAIN	Minimum 10 db	<u>18</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>13</u> watts
5. VSWR		
30 ft. Parabolic	Maximum 1.4	<u>N/A</u>
End Fire Array	Maximum 1.5	<u>1.26</u>
6. LOW POWER ALARM	3 db down	<u>3</u> db

DATE 7 January 1964

TESTER Wm X. King

SUPERVISOR Edw. Hallen

QUALITY ASSURANCE W. J. King

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/22

STATION TKG

Transmission Path: From Station TKG to Station TCO

Power Amplifier Serial # (1) 23 (2) 26

Amplifier Power Supply, AM2066/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>58</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>875</u> watts
3. GAIN	Minimum 10 db	<u>11.8</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>15.0</u> watts
5. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>1.30</u>
End Fire Array	Maximum 1.5	<u>N/A</u>
6. LOW POWER ALARM	3 db down	<u>3.0</u> db

TRANSMITTER #2	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>57</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>900</u> watts
3. GAIN	Minimum 10 db	<u>11.98</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>8.0</u> watts
5. VSWR		
30 ft. Parabolic	Maximum 1.4	<u>1.21</u>
End Fire Array	Maximum 1.5	<u>N/A</u>
6. LOW POWER ALARM	3 db down	<u>3.0</u> db

DATE 10 December 1963

TESTER Donald T. Bly

SUPERVISOR William R. Smith

QUALITY ASSURANCE Joseph Maloney 6-9

BR11/22

Amplifier Power Supply, AM2066/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>70</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>800</u> watts
3. GAIN	Minimum 10 db	<u>11</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>3.5</u> watts
5. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>1.22</u>
End Fire Array	Maximum 1.5	<u>N/A</u>
6. LOW POWER ALARM	3 db down	<u>-3</u> db

TRANSMITTER #2	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>54</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>800</u> watts
3. GAIN	Minimum 10 db	<u>12</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>2</u> watts
5. VSWR		
30 ft. Parabolic	Maximum 1.4	<u>1.22</u>
End Fire Array	Maximum 1.5	<u>N/A</u>
6. LOW POWER ALARM	3 db down	<u>-3</u> db

DATE 10 DEC. 1963

TESTER *R. E. H. [unclear]*

SUPERVISOR, *H. Frost*

QUALITY ASSURANCE *J. H. Martin* 6-10

Sheet 1 of 1

GEEIA

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/22

STATION TKG

Transmission Path: From Station TKG to Station TES

Power Amplifier Serial # (1) 32 # (2) 31

Amplifier Power Supply, AM2066/TRC (MRC-80)

TRANSMITTER #1	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>56</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>770</u> watts
3. GAIN	Minimum 10 db	<u>13.8</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>13.0</u> watts
5. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>1.28</u>
End Fire Array	Maximum 1.5	<u>N/A</u>
6. LOW POWER ALARM	3 db down	<u>3.0</u> db

TRANSMITTER #2	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>56</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>770</u> watts
3. GAIN	Minimum 10 db	<u>13.8</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>9.5</u> watts
5. VSWR		
30 ft. Parabolic	Maximum 1.4	<u>1.25</u>
End Fire Array	Maximum 1.5	<u>N/A</u>
6. LOW POWER ALARM	3 db down	<u>3.0</u> db

DATE 15 DECEMBER 1963

TESTER David G. Bly

SUPERVISOR William R. Dredge

QUALITY ASSURANCE Joseph M. Kowicz 6-11

Sheet 1 of 1 CEBIA David A. Kowicz

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/22

STATION TES

Transmission Path: From Station TES to Station TKG

Power Amplifier Serial # #1 34 #2 33

Amplifier Power Supply, AM2066/TRC (MRC-80)

TRANSMITTER #1 H	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>60</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>800</u> watts
3. GAIN	Minimum 10 db	<u>11.8</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>8</u> watts
5. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>1.17</u>
End Fire Array	Maximum 1.5	<u>N/A</u>
6. LOW POWER ALARM	3 db down	<u>3</u> db

TRANSMITTER #2	EXPECTED	ACTUAL
1. INPUT POWER	Minimum 50 watts	<u>60</u> watts
2. OUTPUT POWER	Minimum 500 watts	<u>800</u> watts
3. GAIN	Minimum 10 db	<u>11.8</u> db
4. REFLECTED POWER	For VSWR Reference only	<u>2</u> watts
5. VSWR		
30 ft. Parabolic	Maximum 1.4	<u>1.18</u>
End Fire Array	Maximum 1.5	<u>N/A</u>
6. LOW POWER ALARM	3 db down	<u>3</u> db

DATE 15 December 1963

TESTER Mr. R. Smith

SUPERVISOR R. C. Ellerbe

QUALITY ASSURANCE Stan Pankel

Sheet 1 of 6

Ralph L. Hargis

6-12

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/23

STATION G P A

Transmission Path: From Station G P A To Station G H O

Receiver Serial # 4299 & 4434

Receiver, R-417/TRC with Selector SA-607/TRC (MRC-80)

	EXPECTED	ACTUAL
1. COMBING ACTION		
Output, Channel 1	50mv \pm 0.5 db	<u>50</u> <u>47</u> mv
Output, Channel 2	50mv \pm 0.5 db	<u>50</u> <u>40</u> mv
Combined output, Channels 1 & 2	50mv \pm 3 db - 0	Reading not taken mv <u>50</u>
2. QUIETING SENSITIVITY		
Input level Rec #1	Maximum 3uv	<u>2.6</u> uv
Input level Rec #2	Maximum 3uv	<u>2.9</u> uv
		REC #1 REC #2
3. BANDWIDTH		
Lower limit		<u>275</u> KC <u>320</u> KC
Upper limit		<u>280</u> KC <u>230</u> KC
Bandwidth	540KC \pm 25KC	<u>555</u> KC <u>550</u> KC
4. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>N/A</u> <u>N/A</u>
End Fire Array	Maximum 1.5	<u>1.4</u> <u>1.1</u>

DATE 7 JANUARY 1964
TESTER R. F. Hillman
SUPERVISOR C. J. [unclear]
QUALITY ASSURANCE [unclear]

GEETA

6-13

BR/47

Data sheet 23

SITE GPA(GHO)

Ref: DD/250 item #2

1. Combining Action

A. Output channel 1

50mv \pm 0.5db

50mv.

B. Output channel 2

11 11

50mv.

C. Combined output channel 1&2

50mv \pm 3db
- 0db

50mv.

MC:mc

6-13A

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/23

STATION GHO

Transmission Path: From Station GHO To Station GPA

Receiver Serial # 1-4251 #2-4256

Receiver, R-417/TRC with Selector SA-607/TRC (MRC-80)

	EXPECTED	ACTUAL
1. COMBING ACTION		
Output, Channel 1	50mv \pm 0.5 db	<u>50</u> mv
Output, Channel 2	50mv \pm 0.5 db	<u>50</u> mv
Combined output, Channels 1 & 2	50mv \pm 3 db - 0	<u>50</u> mv
2. QUIETING SENSITIVITY		
Input level Rec #1	Maximum 3uv	<u>3</u> uv
Input level Rec #2	Maximum 3uv	<u>*3.85</u> uv
	REC #1	REC #2
3. BANDWIDTH		
Lower limit	369.2299 ^{MC} KC	369.2330 ^K KMC
Upper limit	369.7706 ^{MC} KC	369.7707 ^K KMC
Bandwidth	540KC \pm 25KC	<u>540</u> KC <u>546.8</u> KC
4. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>N/A</u> <u>N/A</u>
End Fire Array	Maximum 1.5	<u>1.14</u> <u>1.10</u>

* Quieting Sensitivity RX#2 is out of specifications.

DATE 7 January 1964
TESTER [Signature]
SUPERVISOR [Signature]
QUALITY ASSURANCE [Signature] 6-14
GEEIA Ralph L. Kruger

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/23

STATION TKG

Transmission Path: From Station TKG To Station TCO

Receiver Serial # (1) 4286 (2) 4397

Receiver, R-417/TRC with Selector SA-607/TRC (MRC-80)

EXPECTED

ACTUAL

1. COMBING ACTION

Output, Channel 1	50mv \pm 0.5 db	647 51.0 *27.0 mv
Output, Channel 2	50mv \pm 0.5 db	647 51.0 *54.0 mv
Combined output, Channels 1 & 2	50mv \pm 3 db - 0	647 Sig on *1.88.0 55.0 mv 647 Sig on *287.0

2. QUIETING SENSITIVITY

Input level Rec #1	Maximum 3uv	<u>1.20 uv</u>
Input level Rec #2	Maximum 3uv	<u>2.60 uv</u>

REC #1

REC #2

3. BANDWIDTH

Lower limit		<u>471 KC</u>	<u>446 KC</u>
Upper limit		<u>859 KC</u>	<u>902 KC</u>
Bandwidth	540KC \pm 25KC	<u>*388 KC</u>	<u>*456 KC</u>

4. VSWR

30 Ft. Parabolic	Maximum 1.4	<u>1.16</u>	<u>1.17</u>
End Fire Array	Maximum 1.5	<u>N/A</u>	<u>N/A</u>

* OUT OF SPEC.

DATE 10 December 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

6-15

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/23

STATION TCO

Transmission Path: From Station TWO To Station TKG

Receiver Serial # #1, 3991 #2, 3223

Receiver, R-417/TRC with Selector SA-607/TRC (MRC-80)

	EXPECTED	ACTUAL
1. COMBING ACTION		
Output, Channel 1	50mv \pm 0.5 db	<u>50</u> mv
Output, Channel 2	50mv \pm 0.5 db	<u>50</u> mv
Combined output, Channels 1 & 2	50mv \pm 3 db - 0	<u>50</u> mv
2. QUIETING SENSITIVITY		
Input level Rec #1	Maximum 3uv	<u>2.8</u> uv
Input level Rec #2	Maximum 3uv	<u>2.7</u> uv
	REC #1	REC #2
3. BANDWIDTH		
Lower limit		<u>286</u> KC <u>289</u> KC
Upper limit		<u>254</u> KC <u>271</u> KC
Bandwidth	540KC \pm 25KC	<u>540</u> KC <u>560</u> KC
4. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>1.22</u> <u>1.19</u>
End Fire Array	Maximum 1.5	<u>N/A</u> <u>N/A</u>

DATE 10 DEC. 1963
TESTER [Signature]
SUPERVISOR [Signature]
QUALITY ASSURANCE [Signature]
GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BR11/23

STATION TKG

Transmission Path: From Station TKG To Station TES

Receiver Serial # (1) 4429 # (2) 277

Receiver, R-417/TRC with Selector SA-607/TRC (MRC-80)

	EXPECTED	ACTUAL
1. COMBING ACTION		
Output, Channel 1	50mv \pm 0.5 db	* mv
Output, Channel 2	50mv \pm 0.5 db	* mv
Combined output, Channels 1 & 2	50mv \pm 3 db - 0	* mv
2. QUIETING SENSITIVITY		
Input level Rec #1	Maximum 3uv	<i>for 29uv</i> 3.0 uv
Input level Rec #2	Maximum 3uv	3.0 uv
	REC #1	REC #2
3. BANDWIDTH		
Lower limit	-247 KC	-290 KC
Upper limit	+210 KC	+120 KC
Bandwidth	540KC \pm 25KC <i>523.7</i> * 457 KC	* 410 KC
4. VSWR		
30 Ft. Parabolic	Maximum 1.4	1.26 1.11
End Fire Array	Maximum 1.5	N/A N/A

* OUT OF SPEC.

DATE 15 December 1963
TESTER [Signature]
SUPERVISOR [Signature]
QUALITY ASSURANCE [Signature]
GEBIA [Signature]

6-17

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 STATION

BRII/23

STATION TES

Transmission Path: From Station TES To Station TKG

Receiver Serial # 1- 4408 #2- 967

Receiver, R-417/TRC with Selector SA-607/TRC (MRC-80)

	EXPECTED	ACTUAL
1. COMBING ACTION		
Output, Channel 1	50mv \pm 0.5 db	<u>50</u> mv
Output, Channel 2	50mv \pm 0.5 db	<u>50</u> mv
Combined output, Channels 1 & 2	50mv \pm 3 db - 0	<u>50</u> mv
2. QUIETING SENSITIVITY		
Input level Rec #1	Maximum 3uv	<u>2.5</u> uv
Input level Rec #2	Maximum 3uv	<u>2.75</u> uv
	REC #1	REC #2
3. BANDWIDTH		
Lower limit		<u>268</u> KC <u>278</u> KC
Upper limit		<u>266</u> KC <u>285</u> KC
Bandwidth	540KC \pm 25KC	<u>531</u> KC <u>563</u> KC
4. VSWR		
30 Ft. Parabolic	Maximum 1.4	<u>1.06</u> <u>1.04</u>
End Fire Array	Maximum 1.5	<u>N/A</u> <u>N/A</u>

DATE 15 December 1963
TESTER W. H. ...
SUPERVISOR R. C. ...
QUALITY ASSURANCE Stan ...

GEEIA Ralph Krueger 6-18

FEDERAL ELECTRIC CORPORATION

BR11/24 Rev.

BIG RALLY II. PROJECT

1 October 1963

DATA SHEET

AN/MRC-80 LINK TESTS

STATION G P ATransmission Path: From G P A to G H O

1. DEVIATION

SYS #1

SYS #2

A. MTR CAL, TX

A.A. Int.A.A. Int.

B. 1KC ADJ, TX

A.A. Int.A.A. Int.

C. MOD ADJ, TX

A.A. Int.A.A. Int.

D. MOD 1KC IN, TX

A.A. Int.A.A. Int.

2. BASEBAND FREQUENCY RESPONSE

REQUIREMENT: Within ± 1 db of 32KC

Reference Frequency

(See NOTE)

8 KC

.5 dbm-.3 dbm

16 KC

.4 dbm-.1 dbm

24 KC

.3 dbm-.1 dbm

32 KC (Reference)

0 dbm0 dbm

40 KC

0 dbm-.2 dbm

48 KC

.1 dbm-.1 dbm

56 KC

0 dbm-.1 dbm

68 KC

-.4 dbm-.6 dbm

90 KC Regrd.: 35db below 32KC

-4.8 dbm-49.5 dbm

Reference

NOTE: Due to the nature of tropospheric scatter, this requirement may be exceeded for short term variations.

3. NOISE PEAKS AND SPURIOUS TONES

Freq. 1KC

NOISE LEVEL

	SYS #1	SYS #2
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm

NO TONES GREATER THAN
-55 dbm WERE NOTED

NOTE: Record all noise peaks or tones greater than -55dbm.

DATE 7 JANUARY 1964

TESTER *E. E. Gibson*

SUPERVISOR *P. J. Sweeney*

QUALITY ASSURANCE *J. H. [illegible]*

GEEIA *Sgt. H. [illegible]*

FEDERAL ELECTRIC CORPORATION

BRH/24 Rev.

BIG RALLY II. PROJECT

1 October 1963

DATA SHEET

AN/MRC-80 LINK TESTS

STATION GHOTransmission Path: From GPA to GHO

1. DEVIATION

SYS #1

SYS #2

A. MTR CAL, TX

RSK Int.RSK Int.

B. 1KC ADJ, TX

RSK Int.RSK Int.

C. MOD ADJ, TX

RSK Int.RSK Int.

D. MOD 1KC IN, TX

RSK Int.RSK Int.2. BASEBAND FREQUENCY RESPONSE
REQUIREMENT: Within ± 1 db of 32KC
Reference Frequency
(See NOTE)

8 KC

-.5 dbm-.7 dbm

16 KC

-.25 dbm-.5 dbm

24 KC

-.25 dbm-.4 dbm

32 KC (Reference)

-.25 dbm-.4 dbm

40 KC

-.25 dbm-.3 dbm

48 KC

0 dbm-.2 dbm

56 KC

-.20 dbm-.2 dbm

68 KC

-.5 dbm-.7 dbm90 KC Regrd.: 35db below 32KC
Reference-39.5 dbm-44 dbm

NOTE: Due to the nature of tropospheric scatter, this requirement may be exceeded for short term variations.

8. NOISE PEAKS AND SPURIOUS TONES

Freq. 1KC

NOISE LEVEL

	SYS #1	SYS #2
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm
_____	_____ dbm	_____ dbm

Note: No noise above -65dbm

NOTE: Record all noise peaks or tones greater than -55dbm.

DATE 7 January 1964
 TESTER W. S. Green
 SUPERVISOR Ed Mallin
 QUALITY ASSURANCE W. C. P. P.
 GEEIA Ralph S. Kruger

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 LINK TESTS

BR11/24 REV
1 October 1963

STATION TKG

Transmission Path: From TKG to TCO

1. DEVIATION

SYS #1

SYS #2

- A. MTR CAL, TX
- B. 1KC ADJ, TX
- C. MOD ADJ, TX
- D. MOD 1KC IN, TX

<u>NB</u> Int.	<u>NB</u> Int.
<u>1.5</u> Int.	<u>1.5</u> Int.
<u>NB</u> Int.	<u>1.5</u> Int.
<u>1.5</u> Int.	<u>NB</u> Int.

2. BASEBAND FREQUENCY RESPONSE

REQUIREMENT: Within \pm 1db of 32KC
Reference Frequency
(See NOTE)

8 KC	<u>-1.4</u> dbm	<u>-1.0</u> dbm
16 KC	<u>-1.2</u> dbm	<u>-0.9</u> dbm
24 KC	<u>-0.8</u> dbm	<u>-0.8</u> dbm
32 KC (Reference)	<u>-0.4</u> dbm	<u>-0.7</u> dbm
40 KC	<u>-0.1</u> dbm	<u>-0.7</u> dbm
48 KC	<u>+0.3</u> dbm	<u>-0.8</u> dbm
56 KC	<u>+0.4</u> dbm	<u>-0.9</u> dbm
68 KC	<u>+0.3</u> dbm	<u>-1.1</u> dbm
90 KC Regrd.: 35db below 32KC Reference	<u>-52.5</u> dbm	<u>-55.0</u> dbm

NOTE: Due to the nature of tropospheric scatter, this requirement may be exceeded for short term variations.

3. NOISE PEAKS AND SPURIOUS TONES

Freq. 1KC

NOISE LEVEL

SYS #1

SYS #2

<u>N/A</u>	Baseband scanned, no levels found greater than -55dbm.
<u>N/A</u>	
<u>N/A</u>	
<u>N/A</u>	
<u>N/A</u>	

<u>N/A</u> dbm	<u>N/A</u> dbm
<u>N/A</u> dbm	<u>N/A</u> dbm
<u>N/A</u> dbm	<u>N/A</u> dbm
<u>N/A</u> dbm	<u>N/A</u> dbm
<u>N/A</u> dbm	<u>N/A</u> dbm

NOTE: Record all noise peaks or tones greater than -55dbm.

DATE 10 December 1963

TESTER Robert T. Blum

SUPERVISOR W. G. ...

QUALITY ASSURANCE Joseph M. ...

GEEIA Donald A. ...

6-23

FEDERAL ELECTRIC CORPORATION

BIG RALLY II PROJECT

DATA SHEET

AN/MRC-80 LINK TESTS

BR11/24 Rev.
1 October 1963STATION TCOTransmission Path: From TCO to TAG

1. DEVIATION

SYS #1

SYS #2

A. MTR CAL, TX

RE RE Int.RE RE Int.

B. 1KC ADJ, TX

RE RE Int.RE RE Int.

C. MOD ADJ, TX

RE RE Int.RE RE Int.

D. MOD 1KC IN, TX

RE RE Int.RE RE Int.2. BASEBAND FREQUENCY RESPONSE
REQUIREMENT: Within ± 1 db of 32KC
Reference Frequency
(See NOTE)

8 KC

+4.5 dbm ± 4 dbm

16 KC

+4.75 dbm ± 4 dbm

24 KC

+4.75 dbm ± 4 dbm

32 KC (Reference)

 ± 5 dbm ± 4 dbm

40 KC

+4.5 dbm ± 4 dbm

48 KC

+4.5 dbm ± 4 dbm

56 KC

 ± 4 dbm ± 3.5 dbm

68 KC

 ± 4 dbm ± 4 dbm90 KC Regrd.: 35db below 32KC
Reference-55 dbm-58 dbm

NOTE: Due to the nature of tropospheric scatter, this requirement may be exceeded for short term variations.

3. NOISE PEAKS AND SPURIOUS TONES

Freq. 1KC

NOISE LEVEL

	SYS #1	SYS #2
<u>NONE</u>	<u>NONE dbm</u>	<u>NONE dbm</u>
<u>NONE</u>	<u>NONE dbm</u>	<u>NONE dbm</u>
<u>NONE</u>	<u>NONE dbm</u>	<u>NONE dbm</u>
<u>NONE</u>	<u>NONE dbm</u>	<u>NONE dbm</u>
<u>NONE</u>	<u>NONE dbm</u>	<u>NONE dbm</u>

NOTE: Record all noise peaks or tones greater than -55dbm.

DATE 10 DEC. 1963

TESTER R. E. Hume

SUPERVISOR J. Frost

QUALITY ASSURANCE J. M. Winters

GEEIA Ralph S. Kruger

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-80 LINK TESTS

BRII/24 REV.
1 OCTOBER 1963

STATION TKG

Transmission Path: From TKG to TES

1. DEVIATION

- A. MTR GAL, TX
- B. 1KC ADJ, TX
- C. MOD ADJ, TX
- D. MOD 1KC IN, TX

SYS #1

1/4 Int.
1/4 Int.
1/4 Int.
1/4 Int.

SYS #2

1/4 Int.
6/16 Int.
1/4 Int.
1/4 Int.

2. BASEBAND FREQUENCY RESPONSE

REQUIREMENT: Within ± 1 db of 32KC
Reference Frequency
(See NOTE)

- 8 KC
- 16 KC
- 24 KC
- 32 KC (Reference)
- 40 KC
- 48 KC
- 56 KC
- 68 KC
- 90 KC Regrd: 35db below 32KC
Reference

-9.7 dbm
-9.8 dbm
-9.7 dbm
-9.8 dbm
-9.5 dbm
-9.4 dbm
-9.8 dbm
-9.8 dbm
-9.8 dbm
-63.0 dbm
N/A dbm

-9.2 dbm
-9.1 dbm
-9.2 dbm
-9.3 dbm
-9.3 dbm
-9.4 dbm
-9.4 dbm
-9.2 dbm
-50.0 dbm
N/A dbm

NOTE: Due to the nature of tropospheric scatter, this requirement may be exceeded for short term variations.

3. NOISE PEAKS AND SPURIOUS TONES

Freq. 1 KC

N/A
N/A
N/A
N/A
N/A

Baseband scanned, no levels
found greater than -55dbm.

NOISE LEVEL

SYS #1

N/A
N/A
N/A
N/A
N/A

SYS #2

N/A
N/A
N/A
N/A
N/A

NOTE: Record all noise peaks or tones greater than -55dbm

DATE 15 December 1963

TESTER David T. H. C.

SUPERVISOR William R. Burbridge

QUALITY ASSURANCE John Malbran

GEEIA Ronald G. Johnson 10-26

FEDERAL ELECTRIC CORPORATION

HIG RALLY II PROJECT

DATA SHEET
AN/MRC-80 LINK TESTS

BRIT/24 Revised
1 Oct. 1963

	STATION	TES
Transmission Path: From <u>TES</u> To <u>TKG</u>		
1. DEVIATION	SYS #1	SYS #2
A. MTR CAL, TX	<u>MB</u> Int	<u>MB</u> Int
B. 1KC ADJ, TX	<u>MB</u> Int	<u>MB</u> Int
C. MOD ADJ, TX	<u>MB</u> Int	<u>MB</u> Int
D. MOD 1KC IN, TX	<u>MB</u> Int	<u>MB</u> Int
2. BASEBAND FREQUENCY RESPONSE		
Requirement: Within + 1db of 32KC		
Reference frequency (See note)		
8 KC	<u>-10.5dbm</u>	<u>-10.0 dbm</u>
16KC	<u>-10.5dbm</u>	<u>-10.0 dbm</u>
24KC	<u>-10.5dbm</u>	<u>-9.5 dbm</u>
32KC	<u>-10.5dbm</u>	<u>-10.0 dbm</u>
40KC	<u>-10.5dbm</u>	<u>-10.5 dbm</u>
48KC	<u>-10.5dbm</u>	<u>-10.5 dbm</u>
56KC	<u>-10.75dbm</u>	<u>-10.5 dbm</u>
68KC	<u>-10.0dbm</u>	<u>-9.0 dbm</u>
90KC Required: 35db below 32KC reference	<u>-61.5 dbm</u>	<u>-61.0 dbm</u>

NOTE: Due to the nature of tropospheric scatter, this requirement may be exceeded for short term variations.

3. NOISE PEAKS AND SPURIOUS TONES

FREQUENCY		NOISE LEVEL	
		SYS #1	SYS #2
_____	NO TONES OR NOISE ABOVE	_____dbm	_____dbm
_____	-60 dbm.	_____dbm	_____dbm
_____		_____dbm	_____dbm
_____		_____dbm	_____dbm

NOTE: Record all noise peaks or tones greater than - 55 dbm.

DATE 15 Dec 1963

TESTER M. Bush

SUPERVISOR R. C. Muck

QUALITY ASSURANCE Sten Vandell

GEELA Ralph H. Henger

BIG RALLY II PROJECT

DATA SHEET

AN/MRC-85 STATION TEST

STATION TTDTransmission Path: From Station TTD to Station GPAExciter Serial No. 037 Frequency 392.5 MC

AN/MRC-85 EXCITER, RADIO

	EXPECTED	ACTUAL
1. POWER OUTPUT		
Power Output	Minimum 9 Watts	<u>10</u> watts
2. CARRIER FREQUENCY		
Frequency	.001% of assigned	<u>392.5</u> MC
3. EXCITER RESPONSE AND DEVIATION		
Lower 1 db point		<u>391.705</u> MC
Upper 1 db point		<u>393.295</u> MC
Bandwidth	Minimum 1.5 MC	<u>1.59</u> MC
High Frequency Deviation	Rec 073	Rec 074
J-14 on S1893	-19db \pm 0.5db	<u>-19.0</u> db
Low Frequency Deviation		
J2 on S1892	14 mv. \pm 1 mv	<u>+13.5</u> mv
4. ORDER WIRE DEVIATION & GAIN		
Oscillator Output	-19.5dbm \pm 0.5dbm	<u>-19.5</u> dbm
Output Level	-10.5dbm \pm 0.5dbm	<u>-10.5</u> dbm
5. PILOT TONE LEVEL AND DEVIATION		
Radio Pilot Level	20 to 35 volts	<u>21.5</u> volts
Deviation at J14 on S1893	-20dbm \pm 0.5dbm	<u>-19.0</u> dbm
6. DUAL MODULATOR OPERATION		
Exciter No. 1 Driving		Initials
Exciter No. 2 Driving		Initials

DATE 21 NOVEMBER 1963TESTER Marlin LeiphartSUPERVISOR AlvinQUALITY ASSURANCE StanleyGENIA Ralph L. Kriger

Sheet 1 of 1

BIG RALLY II PROJECT

DATA SHEET

AN/MRC-85 STATION TEST

STATION TIDTransmission Path: From Station TID to Station GPAExciter Serial No. 038 Frequency 392.5 MC

AN/MRC-85 EXCITER, RADIO

	EXPECTED	ACTUAL
1. POWER OUTPUT		
Power Output	Minimum 9 Watts	<u>10</u> watts
2. CARRIER FREQUENCY		
Frequency	.001% of assigned	<u>392.4998</u> MC
3. EXCITER RESPONSE AND DEVIATION		
Lower 1 db point		<u>391.3998</u> MC
Upper 1 db point		<u>393.5998</u> MC
Bandwidth	Minimum 1.5 MC	<u>2.2</u> MC
High Frequency Deviation		Rec 075 Rec 076
J-14 on S1893	-19db \pm 0.5db	<u>-19.0</u> <u>-19.0</u> db
Low Frequency Deviation		
J2 on S1892	14 mv. \pm 1 mv	<u>13.0</u> <u>13.4</u> mv
4. ORDER WIRE DEVIATION & GAIN		
Oscillator Output	-19.5dbm \pm 0.5dbm	<u>-19.5</u> <u>-19.5</u> dbm
Output Level	-10.5dbm \pm 0.5dbm	<u>-10.5</u> <u>-10.5</u> dbm
5. PILOT TONE LEVEL AND DEVIATION		
Radio Pilot Level	20 to 35 volts	<u>21.5</u> volts
Deviation at J14 on S1893	-20dbm \pm 0.5dbm	<u>-20.0</u> <u>-20.0</u> dbm
6. DUAL MODULATOR OPERATION		
Exciter No. 1 Driving		Initials
Exciter No. 2 Driving		Initials

DATE 22 NOVEMBER 1963TESTER Martin L. SmithSUPERVISOR R. H. SmithQUALITY ASSURANCE R. H. Smith

GEDIA

Sheet 1 of 1

Ralph S. Krueger

BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 STATION TEST

ADDENDUM

Station GPA

Transmission Path: From Station GPA to Station TID

Exciter Serial No. 1 H Frequency 360.5 MC

MRC-85
AN/~~PRG-85~~ EXCITER, RADIO

	EXPECTED	ACTUAL
1. POWER OUTPUT		
Power Output	Minimum ⁹ 10 watts	<u>9.5</u> watts
2. CARRIER FREQUENCY		
Frequency	.001% of assigned	<u>360.498,310</u> MC
3. EXCITER RESPONSE AND DEVIATION		
Lower 1 db point		<u>71143</u> MC
Upper 1 db point		<u>69113</u> MC
Bandwidth	Minimum 1.5 MC	<u>2.03</u> MC
4. HF DEVIATION		
Level at J4	-14 dbm <u>±</u> 0.5 dbm	<u>-14</u> dbm
5. ADJUSTMENT OF FOUR RECEIVERS		<u>MC</u> Initials
6. LF DEVIATION		
Signal level at J14	-10 dbm <u>±</u> 0.5 dbm	<u>-10</u> dbm
7. ORDER WIRE DEVIATION & LEVEL		
Output at J26-J27	-10 dbm <u>±</u> 0.5 dbm	<u>14 -10</u> dbm
8. PILOT TONE LEVEL AND DEVIATION		
Radio Pilot Level at J51	20 to 35 volts	<u>24</u> volts
Deviation at J14 on S1893	-20 dbm <u>±</u> 0.5 dbm	<u>-20</u> dbm
9. DUAL MODULATOR OPERATION		
Exciter No. 1 Driving		<u>*</u> Initials
Exciter No. 2 Driving		<u>*</u> Initials

* Not operational due to defective K-3

DATE 11-24-1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

Sheet 1 of 1
61810 Ronald A. Walman

BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 STATION TEST

ADDENDUMStation GPA Transmission Path: From Station GPA to Station TTD Exciter Serial No. 2 V Frequency 360.5 MC AN/~~MRC-85~~ ^{MRC-85} EXCITER, RADIO

EXPECTED

ACTUAL

1. POWER OUTPUT

Power Output

Minimum ⁹~~10~~ watts10 watts

2. CARRIER FREQUENCY

Frequency

.001% of assigned

360.498.069 MC

3. EXCITER RESPONSE AND DEVIATION

Lower 1 db point

70789 MC

Upper 1 db point

69.131 MC

Bandwidth

Minimum 1.5 MC

1.65 MC

4. HF DEVIATION

Level at J4

-14 dbm ± 0.5 dbm-14 dbm

5. ADJUSTMENT OF FOUR RECEIVERS

MC Initials

6. LF DEVIATION

Signal level at J14

-10 dbm ± 0.5 dbm-10 dbm

7. ORDER WIRE DEVIATION & LEVEL

Output at J26-J27

-10 dbm ± 0.5 dbm-10 dbm

8. PILOT TONE LEVEL AND DEVIATION

Radio Pilot Level at J51

20 to 35 volts

26 volts

Deviation at J14 on S1893

-20 dbm ± 0.5 dbm-20 dbm

9. DUAL MODULATOR OPERATION

Exciter No. 1 Driving

* Initials

Exciter No. 2 Driving

* InitialsDATE 11-24-1963TESTER SUPERVISOR QUALITY ASSURANCE

Sheet 1 of 1

* Not operational due to defective T6/

GFB 110 Bernard A. Holmer

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 STATION TEST

BR II/12

STATION GPA

Transmission Path: From Station GPA to Station TID

1 KW Amplifier Serial No. 1H Frequency 360.5 MC

Exciter Serial No. 1H

AN/MRC-85 POWER AMPLIFIER, RADIO

		EXPECTED		ACTUAL
		1 KW	10 KW	
1. INPUT POWER	Min. 6 watts	6 watts		<u>12</u> watts
2. OUTPUT POWER	Min. 1 KW	10 KW		<u>1KW</u> watts
3. REFLECTED POWER	Max. 28 watts	280 watts		<u>25.6</u> <u>-0</u> watts
4. VSWR	Max. 1.40	1.40		* <u>1.38</u>
5. FAULT RECYCLING				<u>MC</u> Initials
6. KLYSTRON COOLANT FLOW	Min. 17 GPM			<u>N/A</u> GPM

* Transmission line swept. (FOR 1.5 MHz BANDWIDTH)

DATE 11-20-1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GFEIA [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 STATION TEST

BR II/12

STATION GPA

Transmission Path: From Station GPA to Station TID

1 KW Amplifier Serial No. 2V Frequency 360.5 MC

Exciter Serial No. 2V

AN/MRC-85 POWER AMPLIFIER, RADIO

	EXPECTED		ACTUAL
	1 KW	10 KW	
1. INPUT POWER	Min. 6 watts	6 watts	<u>10</u> watts
2. OUTPUT POWER	Min. 1 KW	10 KW	<u>1KW</u> watts 2.25 1.85
3. REFLECTED POWER	Max. 28 watts	280 watts	* <u>9 15.0</u> watts <u>1.09</u>
4. VSWR	Max. 1.40	1.40	* <u>1.28</u>
5. FAULT RECYCLING			<u>MC</u> Initials
6. KLYSTRON COOLANT FLOW	Min. 17 GPM		<u>N/A</u> GPM

* Transmission line swept. (FOR 1.5mc BANDWIDTH)

DATE 11-20-1963

TESTER *[Signature]*

SUPERVISOR *[Signature]*

QUALITY ASSURANCE *[Signature]*

GEEIA *[Signature]*

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 STATION TEST

BR II/12

STATION TID

Transmission Path: From Station TID to Station GPA

1 KW Amplifier Serial No. 013 Frequency 392.5 MC

Exciter Serial No. 038

AN/MRC-85 POWER AMPLIFIER, RADIO

		EXPECTED	ACTUAL
		1 KW	10 KW
1. INPUT POWER	Min. 6 watts	6 watts	<u>6</u> watts
2. OUTPUT POWER	Min. 1 KW	10 KW	<u>1,000</u> watts
3. REFLECTED POWER	Max. 28 watts	280 watts	<u>8</u> watts
4. VSWR	Max. 1.40	1.40	<u>1.88</u> ^{19 SE}
5. FAULT RECYCLING			<u>ML</u> Initials
6. KLYSTRON COOLANT FLOW	Min. 17 GPM		<u>N/A</u> GPM

DATE 22 NOVEMBER 1963

TESTER Martin Liphart

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEIA Ralph S. Krueger

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 STATION TEST

BR II/12

STATION TID

Transmission Path: From Station TID to Station GPA

1 KW Amplifier Serial No. 014 Frequency 392.5 MC

Exciter Serial No. 037

AN/MRC-85 POWER AMPLIFIER, RADIO

	EXPECTED		ACTUAL
	1 KW	10 KW	
1. INPUT POWER	Min. 6 watts	6 watts	<u>6.0</u> watts
2. OUTPUT POWER	Min. 1 KW	10 KW	<u>1,000</u> watts
3. REFLECTED POWER	Max. 28 watts	280 watts	<u>15</u> watts
4. VSWR	Max. 1.40	1.40	<u>1.26</u>
5. FAULT RECYCLING			<u>ML</u> Initials
6. KLYSTRON COOLANT FLOW	Min. 17 GPM		<u>N/A</u> GPM

DATE 21 NOVEMBER 1963

TESTER Marlin Lupton

SUPERVISOR W. B. L.

QUALITY ASSURANCE Shirley L. L.

CEIA Ralph S. Hargers

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 STATION TEST

BR II/12

STATION TID

Transmission Path: From Station TID to Station GPA

1 KW Amplifier Serial No. 023 Frequency 392.5 MC

Exciter Serial No. 037

AN/MRC-85 POWER AMPLIFIER, RADIO

	EXPECTED		ACTUAL
	1 KW	10 KW	
1. INPUT POWER	Min. 6 watts	6 watts	<u>6</u> watts
2. OUTPUT POWER	Min. 1 KW	10 KW	<u>1,000</u> watts
3. REFLECTED POWER	Max. 28 watts	280 watts	<u>10</u> watts
4. VSWR	Max. 1.40	1.40	<u>1.24</u>
5. FAULT RECYCLING			<u>ML</u> Initials
6. KLYSTRON COOLANT FLOW	Min. 17 GPM		<u>N/A</u> GPM

* Spare klystron carriage.

DATE 22 NOVEMBER 1963

TESTER Malin Lippert

SUPERVISOR QMB

QUALITY ASSURANCE R. L. H. H.

GEEIA Ralph S. Berger

FEDERAL ELECTRIC CORPORATION

BR II/13 Rev.
30 September 196

BIG RALLY II PROJECT

DATA SHEET

AN/MRC-85 LOCAL STATION TESTS

STATION GPA Transmission Path: Station GPA to Station TTD

1. Receiver Gain

RF Amplifier and Converter

Required: Minimum 30db

Rec 1V	Rec 2H	Rec 3H	Rec 4V
35db	34db	34db	32db

Parametric Amplifier & Converter

Required: Minimum 33db

N/A	N/A	N/A	N/A
-----	-----	-----	-----

2. Receiver Sensitivity (20db Quieting Level)

RF Amplifier (4.5db NF)

Required: Maximum 4uv

Rec 1V	Rec 2H	Rec 3H	Rec 4V
2.2	2.3	2.0	2.6

Parametric Amplifier (2db NF)

Required : Maximum 2.5uv

N/A	N/A	N/A	N/A
-----	-----	-----	-----

3. DC Control Voltage

DC Control Volts

Required: -35 Volts

Rec 1V	Rec 2H	Rec 3H	Rec 4V
-35	-35	-35	-35

4. Diversity Combiner

Vertical Receiver Outputs (no input)

Required: Maximum Difference 2db

Vertical Receiver Outputs
(30db quieting-Ref)

Combined (Vert.)

Required: 1.5 to 4.5db less than
individual receiver

Rec 1V Rec 4V

+ 0.8 - 0.5

-27 -28

-30 -31

Rec 2H Rec 3H

Horizontal Receiver Outputs (no input)

Required: Maximum Difference 2db

Horizontal Receiver Outputs
(30db quieting-Ref)

Combined (Horiz.)

Required: 1.5 to 4.5db less than
individual receiver

+1.25 +1.0

-29 -30.5

-32.25 -33.0

5. Receiver Pilot Tone Operation Test

MC initial

6. Antenna System VSWR

Required: Maximum 1.40

Antenna 1

Antenna 2

VERT.

1.05

1.22

HORIZ.

1.28

1.05

Note: All measurements made with HP 400 VTVM

Date 11-26-1963

Tester B. J. Sweeney

Supervisor B. J. Sweeney

Quality Assurance W. Carafin

GEEIA Bernard A. Holman

4. Diversity Combiner

Vertical Receiver Outputs (no input)

Required: Maximum Difference 2db

Vertical Receiver Outputs
(30db quieting-Ref)

Combined (Vert.)

Required: 1.5 to 4.5db less than
individual receiver

Rec	4V	Rec	4V
	-26		-27.5
	-58.5		-56.5
	-60		-58

Horizontal Receiver Outputs (no input)

Required: Maximum Difference 2db

Horizontal Receiver Outputs
(30db quieting-Ref)

Combined (Horiz.)

Required: 1.5 to 4.5db less than
individual receiver

Rec	2H	Rec	3H
	-25.5		-25.5
	-55		-55.5
	-56.5		-57.5

5. Receiver Pilot Tone Operation Test

MC initial

6. Antenna System VSWR

Required: Maximum 1.40

Antenna 1
Antenna 2

VERT.	HORIZ.
1.05	1.28
1.22	1.05

Date 26 November 1963

Tester *R. L. Jones*

Supervisor *P. Sweeney*

Quality Assurance *W. Corry*

GEEIA

Bernard H. Holmes

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 LOCAL STATION TESTS

BR II/13 Rev.
30 September 1960

STATION TID

Transmission Path: Station TID to Station GPA

1. Receiver Gain

RF Amplifier and Converter

075 Rec 1-H	073 Rec 2 H	076 Rec 3 V	074 Rec 4
31.8	32	32.2	36.7

Required: Minimum 30db

Parametric Amplifier & Converter

Required: Minimum 33db

N/A	N/A	N/A	N/A
-----	-----	-----	-----

2. Receiver Sensitivity (20db Quieting Level)

RF Amplifier (4.5db NF)

Rec 1	Rec 2	Rec 3	Rec 4
2.5	3.2	3.1	3.5

Required: Maximum 4uv

Parametric Amplifier (2db NF)

Required : Maximum 2.5uv

N/A	N/A	N/A	N/A
-----	-----	-----	-----

3. DC Control Voltage

DC Control Volts

Required: -35 Volts

Rec 1	Rec 2	Rec 3	Rec 4
-35.0	-35.0	-35.0	-35

4. Diversity Combiner

Vertical Receiver Outputs (no input)

Required: Maximum Difference 2db

Vertical Receiver Outputs

(30db quieting-Ref)

Combined (Vert.)

Required: 1.5 to 4.5db less than
individual receiver

Horizontal Receiver Outputs (no input)

Required: Maximum Difference 2db

Horizontal Receiver Outputs

(30db quieting-Ref)

Combined (Horiz.)

Required: 1.5 to 4.5db less than
individual receiver

Rec	075 1 H	Rec	076 3 V
-----	------------	-----	------------

-31.0	-30.8
-------	-------

-59.5	-59.5
-------	-------

-62.3	-62.0
-------	-------

Rec	073 2 H	Rec	074 4 V
-----	------------	-----	------------

-30.5	-30.5
-------	-------

-59.5	-59.5
------------------	------------------

-60.5	*59.5
-------	-------

-59.5	-59.5
------------------	------------------

-62.5	-62.0
-------	-------

5. Receiver Pilot Tone Operation Test

ML initial

6. Antenna System VSWR

Required: Maximum 1.40

Antenna 1

Antenna 2

VERT.

HORIZ.

1.22

1.22

1.28

1.32

Date 22/11/63

Tester Martin L. L. L.

Supervisor [Signature]

Quality Assurance [Signature]

GEEIA Ralph H. Kruger

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 OVERALL TEST

BRII/14

STATION _____ GPA _____

Transmission Path: From _____ GPA _____ Station to _____ TID _____ Station

Exciter Serial No. 1H

Receiver Serial No. Rec. A# 1V, Rec. B# 2H

Power Amplifier Serial No. 1H

1. SYSTEM INTERMODULATION

Intermodulation Frequency	EXPECTED	ACTUAL	
	NPR	Rec. A 1V	Rec. B 2H
15 KC	<i>Minimum NPR 45db</i> Maximum -55 dbm	-58 dbm	-58 dbm
55 KC	Maximum -55 dbm	-57 dbm	-57 dbm
80 KC	Maximum -55 dbm	-54 dbm	-57 dbm

2. RADIO BASEBAND FREQUENCY RESPONSE

Frequency	EXPECTED	ACTUAL	
		Rec. A 1V	Rec. B 2H
12 KC		-10.6 dbm	-10.7 dbm
20 KC	-2 + 1 db	-10.0 dbm	-10.0 dbm
30 KC	with respect	-10.0 dbm	-10.2 dbm
40 KC	to 30 KC level	-10.2 dbm	-10.2 dbm
50 KC		-10.6 dbm	-10.6 dbm
60 KC		-10.7 dbm	-10.8 dbm
70 KC		-9.8 dbm	-9.75 dbm
80 KC	+0.25 db	-9.9 dbm	-9.8 dbm
90 KC	with respect	-10 dbm	-10.0 dbm
100 KC	to 90 KC level	-10 dbm	-10.1 dbm
110 KC		-10.1 dbm	-10.1 dbm
120 KC		-10 dbm	-10.25 dbm

DATE 24 November 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GFEIA [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 OVERALL TEST

BRII/14

STATION _____ GPA _____

Transmission Path: From GPA Station to TID Station

Exciter Serial No. 2V

Receiver Serial No. Rec. A# 3H, Rec. B# 4V

Power Amplifier Serial No. 2V

1. SYSTEM INTERMODULATION

Intermodulation Frequency	EXPECTED	ACTUAL	
	NPR	Rec. A 3H	Rec. B 4V
15 KC	Minimum NPR 45db	-58 dbm	-60 dbm
55 KC	Maximum -55 dbm	-51 dbm	-52 dbm
80 KC	Maximum -55 dbm	-53 dbm	-52 dbm

2. RADIO BASEBAND FREQUENCY RESPONSE

Frequency	EXPECTED	ACTUAL	
		Rec. A 3H	Rec. B 4V
12 KC		-10.7 dbm	-10.7 dbm
20 KC	-2 + 1 db	-10.0 dbm	-10.1 dbm
30 KC	with respect	-10.0 dbm	-10.0 dbm
40 KC	to 30 KC level	-10.25 dbm	-10.2 dbm
50 KC		-10.6 dbm	-10.4 dbm
60 KC		-11.1 dbm	-10.8 dbm
70 KC		-10.2 dbm	-10.2 dbm
80 KC	+0.25 db	-10.1 dbm	-10.1 dbm
90 KC	with respect	-10.0 dbm	-10.0 dbm
100 KC	to 90 KC level	-9.9 dbm	-9.8 dbm
110 KC		-9.8 dbm	-9.8 dbm
120 KC		-9.8 dbm	-9.75 dbm

DATE 24 November 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEID [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 OVERALL TEST

BRII/14

STATION TID

Transmission Path: From TID Station to GPA Station

Exciter Serial No. 037

Receiver Serial No. Rec. A# 073 H, Rec. B# 074 V

Power Amplifier Serial No. 014

1. SYSTEM INTERMODULATION

Intermodulation Frequency	EXPECTED	ACTUAL	
	NPP	Rec. A	Rec. B
15 KC	Minimum <u>NPR 45db</u>	<u>51</u> dbm	<u>51</u> dbm
55 KC	Maximum <u>55 dbm</u>	<u>51</u> dbm	<u>50</u> dbm
80 KC	Maximum <u>55 dbm</u>	<u>51</u> dbm	<u>51</u> dbm

2. RADIO BASEBAND FREQUENCY RESPONSE

Frequency	EXPECTED	ACTUAL	
		Rec. A	Rec. B
12 KC		<u>-11.1</u> dbm	<u>-11.2</u> dbm
20 KC	<u>-2 + 1 db</u>	<u>-10.2</u> dbm	<u>-10.5</u> dbm
30 KC	<u>with respect</u>	<u>-9.8</u> dbm	<u>-10.0</u> dbm
40 KC	<u>to 30 KC level</u>	<u>-9.4</u> dbm	<u>-9.6</u> dbm
50 KC		<u>-9.1</u> dbm	<u>-9.2</u> dbm
60 KC		<u>-9.0</u> dbm	<u>-9.0</u> dbm
70 KC		<u>-10.0</u> dbm	<u>-10.0</u> dbm
80 KC	<u>+0.25 db</u>	<u>-10.0</u> dbm	<u>-10.0</u> dbm
90 KC	<u>with respect</u>	<u>-10.0</u> dbm	<u>-10.0</u> dbm
100 KC	<u>to 90 KC level</u>	<u>-10.0</u> dbm	<u>-10.0</u> dbm
110 KC		<u>-10.0</u> dbm	<u>-10.0</u> dbm
120 KC		<u>-10.0</u> dbm	<u>-10.0</u> dbm

DATE 21 NOVEMBER 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEBIA Ralph S. Bringer

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 OVERALL TEST

BRII/14

STATION TID

Transmission Path: From TID Station to GPA Station

Exciter Serial No. 038

Receiver Serial No. Rec. A# 1 H 075, Rec. B# 3 V 076

Power Amplifier Serial No. 013

1. SYSTEM INTERMODULATION

Intermodulation Frequency	EXPECTED	ACTUAL	
	<i>NPR</i>	Rec. A	Rec. B
15 KC	<i>Minimum NPR 45db</i> Maximum -55 dbm	<u>53</u> dbm	<u>54</u> dbm
55 KC	Maximum -55 dbm	<u>53</u> dbm	<u>51</u> dbm
80 KC	Maximum -55 dbm	<u>51</u> dbm	<u>50</u> dbm

2. RADIO BASEBAND FREQUENCY RESPONSE

Frequency	EXPECTED	ACTUAL	
		Rec. A	Rec. B
12 KC		<u>-10.7</u> dbm	<u>-11.0</u> dbm
20 KC	-2 + 1 db with respect to 30 KC level	<u>-11.4</u> dbm	<u>-10.2</u> dbm
30 KC		<u>-10.2</u> dbm	<u>-9.8</u> dbm
40 KC		<u>-10.0</u> dbm	<u>-9.6</u> dbm
50 KC		<u>-9.9</u> dbm	<u>-9.4</u> dbm
60 KC		<u>-9.8</u> dbm	<u>-9.2</u> dbm
70 KC		<u>-10.0</u> dbm	<u>-9.9</u> dbm
80 KC	+0.25 db with respect to 90 KC level	<u>-10.0</u> dbm	<u>-10.0</u> dbm
90 KC		<u>-10.0</u> dbm	<u>-10.0</u> dbm
100 KC		<u>-10.0</u> dbm	<u>-10.0</u> dbm
110 KC		<u>-10.0</u> dbm	<u>-10.0</u> dbm
120 KC		<u>-10.0</u> dbm	<u>-10.0</u> dbm

DATE 22 NOVEMBER 1963

TESTER Martin L. Lough

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEIA Ralph S. Hagers

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 LINK TEST

BRII/15

STATION GPA

Transmission Path: From TID Station to GPA Station

V. Exc. Serial No. V. Rec. Serial No.
H. Exc. Serial No. 1H V. Rec. Serial No.
V. KW P.A. No. H. Rec. Serial No. 2H
H. 1 KW P.A. No. 1H H. Rec. Serial No. 3H
V. Trans. Ant. No.
H. Trans. Ant. No. 1

1. RADIO NOISE AND SPURIOUS TONE LEVELS EXPECTED ACTUAL

Baseband Noise

Freq. Noise Level
-60 dbm 200 KC 1600 dbm
 KC dbm
 KC dbm
 KC dbm
 KC dbm

NONE

NOTE: Record all noise signals greater than -60 dbm, except
signal at 60 KC.

2. RADIO BASEBAND FREQUENCY RESPONSE

* MEASUREMENTS

MADE WITH A 600Ω

MTR ACROSS A 75Ω LOAD.

* Frequency

12 KC

20 KC

30 KC

40 KC

50 KC

60 KC

70 KC

80 KC

90 KC

100 KC

110 KC

120 KC

EXPECTED ACTUAL

-2 +1 dbm -17.1 dbm
with respect -16.9 dbm
to 30 KC level -16.3 dbm
-16.5 dbm
-16.1 dbm
-16.1 dbm
-17.0 dbm
+ 0.25 dbm -17.0 dbm
with respect -17.0 dbm
to 90 KC level -17.1 dbm
-17.1 dbm
-17.2 dbm

DATE 24 November 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

Sheet 1 of 1 GFC-10 Derald A. Holmes

7-19

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 LINK TEST

BRH/15

STATION GPA

Transmission Path: From TID Station to GPA Station

V. Exc. Serial No. 2V V. Rec. Serial No. 1V
H. Exc. Serial No. V. Rec. Serial No. 1V
V. 1 KW P.A. No. 2V H. Rec. Serial No.
H. KW P.A. No. H. Rec. Serial No.
V. Trans. Ant. No. 2
H. Trans. Ant. No.

1. RADIO NOISE AND SPURIOUS TONE LEVELS EXPECTED ACTUAL

Baseband Noise

-60 dbm

Freq. Noise Level
KC dbm
KC dbm
KC dbm
KC dbm
KC dbm

NONE

NOTE: Record all noise signals greater than -60 dbm, except signal at 60 KC.

2. RADIO BASEBAND FREQUENCY RESPONSE

* MEASUREMENTS MADE	* Frequency	EXPECTED	ACTUAL
WITH A 600 OHM MTR ACROSS A 75 OHM LOAD.	12 KC		-19.3 dbm
	20 KC	-2 +1 dbm	-18.7 dbm
	30 KC	with respect	-18.4 dbm
	40 KC	to 30 KC level	-18.1 dbm
	50 KC		-18.1 dbm
	60 KC		-18.0 dbm
	70 KC		-18.3 dbm
	80 KC	+0.25 dbm	-18.3 dbm
	90 KC	with respect	-18.5 dbm
	100 KC	to 90 KC level	-18.5 dbm
	110 KC		-18.5 dbm
	120 KC		-18.5 dbm

DATE 24 November 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

Sheet 1 of 1 GFCIA [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 LINK TEST

BRII/15

STATION TID

Transmission Path: From TID Station to GPA Station

V. Exc. Serial No. 2 Ser. 037 V. Rec. Serial No. 4 Ser. 074
H. Exc. Serial No. 1 Ser. 038 V. Rec. Serial No. 3 Ser. 076
V. 1 KW P.A. No. 2 Ser. 023 H. Rec. Serial No. 2 Ser. 075
H. 1 KW P.A. No. 1 Ser. 013 H. Rec. Serial No. 1 Ser. 073
V. Trans. Ant. No. 2
H. Trans. Ant. No. 1

1. RADIO NOISE AND SPURIOUS TONE LEVELS EXPECTED ACTUAL

Baseband Noise	-60 dbm	Freq. Noise Level
		<u> </u> KC <u> </u> dbm
NO READINGS NOTED ABOVE -70 dbm on VERTICAL		<u> </u> KC <u> </u> dbm
RECEIVERS.		<u> </u> KC <u> </u> dbm
		<u> </u> KC <u> </u> dbm
		<u> </u> KC <u> </u> dbm

NOTE: Record all noise signals greater than -60 dbm, except signal at 60 KC.

2. RADIO BASEBAND FREQUENCY RESPONSE

Frequency	EXPECTED	ACTUAL
12 KC		<u> </u> dbm
20 KC	-2 +1 dbm	<u>-10.5</u> dbm
30 KC	with respect	<u>-10.4</u> dbm
40 KC	to 30 KC level	<u>-10.5</u> dbm
50 KC		<u>-10.6</u> dbm
60 KC		<u>-10.7</u> dbm
70 KC		<u>-9.9</u> dbm
80 KC	+0.25 dbm	<u>-9.9</u> dbm
90 KC	with respect	<u>-10.0</u> dbm
100 KC	to 90 KC level	<u>-10.0</u> dbm
110 KC		<u>-10.0</u> dbm
120 KC		<u>-10.0</u> dbm

DATE 7-2-1963
TESTER Martin
SUPERVISOR [Signature]
QUALITY ASSURANCE [Signature]
Sheet 1 of 1 GENIA Ralph S. Berger

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/MRC-85 LINK TEST

BRH/15

STATION TID

Transmission Path: From TID Station to GPA Station

V. Exc. Serial No. 2 Ser. 037 V. Rec. Serial No. 4 Ser. 074
H. Exc. Serial No. 1 Ser. 038 V. Rec. Serial No. 3 Ser. 076
V. 1 KW P.A. No. 2 Ser. 023 H. Rec. Serial No. 2 Ser. 075
H. 1 KW P.A. No. 1 Ser. 013 H. Rec. Serial No. 1 Ser. 073
V. Trans. Ant. No. 2
H. Trans. Ant. No. 1

1. RADIO NOISE AND SPURIOUS TONE LEVELS EXPECTED ACTUAL

Baseband Noise

-60 dbm

Freq. Noise Level
KC dbm
KC dbm
KC dbm
KC dbm
KC dbm

NO READINGS ABOVE -70 dbm NOTED ON
HORIZONTAL RECEIVERS.

NOTE: Record all noise signals greater than -60 dbm, except
signal at 60 KC.

2. RADIO BASEBAND FREQUENCY RESPONSE

Frequency

EXPECTED ACTUAL

12 KC

HORIZONTAL OVER'S
-11.1 dbm

20 KC

-2 +1 dbm

-10.3 dbm

30 KC

with respect

-10.1 dbm

40 KC

to 30 KC level

-10.2 dbm

50 KC

-10.3 dbm

60 KC

-10.5 dbm

70 KC

-10.4 dbm

80 KC

+0.25 dbm

-10.3 dbm

90 KC

with respect

-10.4 dbm

100 KC

to 90 KC level

-10.3 dbm

110 KC

-10.4 dbm

120 KC

-10.4 dbm

DATE 24 NOVEMBER 1963

TESTER Martin Lepina

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

Sheet 1 of 1 GERTIA

Ralph S. Hagers

7-22

FEDERAL ELECTRIC CORPORATION

BR11/71

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 STATION TEST

Transmission Path: From Station T.I.D. to STATION T. K.G.

Exciter Serial No. # 002 Frequency 895.92 MC

AN/FRC-39 EXCITER, RADIO

	EXPECTED	ACTUAL
1. POWER OUTPUT Power Output	Minimum 10 watts	<u>15</u> watts
2. CARRIER FREQUENCY Frequency	.001% of assigned	<u>895.920820</u> MC
3. EXCITER RESPONSE AND DEVIATION Lower 1 db point Upper 1 db point Bandwidth	Minimum 6.0 MC	<u>890.54</u> MC <u>901.6</u> MC <u>11.06</u> MC
4. HF Deviation Level at J4	<u>14dbm + 0.5 dbm</u>	<u>- 13.9</u> dbm
5. ADJUSTMENT OF FOUR RECEIVERS		<u>R.S.K.</u> Initials
6. LF DEVIATION Signal Level at J14	<u>10dbm + 0.5dbm</u>	<u>- 10</u> dbm
7. ORDER WIRE DEVIATION & LEVEL Output at J26-J27	<u>10dbm + 0.5dbm</u>	<u>- 10</u> dbm
8. PILOT TONE LEVEL AND DEVIATION Radio Pilot Level J51 Deviation at J14 on S1893	20 to 35 volts <u>-20 dbm + 0.5 dbm</u>	<u>22</u> volts <u>-20</u> dbm
9. DUAL MODULATOR OPERATION Exciter No. 1 Driving Exciter No. 2 Driving		<u>R.S.K.</u> Initials <u>R.S.K.</u> Initials

DATE

5 DEC 1963

TESTER

R. S. K.

SUPERVISOR

B. Gierst

QUALITY ASSURANCE

Detrick Hunt

GEEIA

Ralph S. Keener

8-1

FEDERAL ELECTRIC CORPORATION

BR11/71

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 STATION TEST

Transmission Path: From Station T.I.D. to STATION T.K.G.

Exciter Serial No. # 001 Frequency 895.92 MC

AN/FRC-39 EXCITER, RADIO

	EXPECTED	ACTUAL
1. POWER OUTPUT Power Output	Minimum 10 watts	<u>12</u> watts
2. CARRIER FREQUENCY Frequency	.001% of assigned	<u>895.915215</u> MC
3. EXCITER RESPONSE AND DEVIATION Lower 1 db point Upper 1 db point Bandwidth	Minimum 6.0 MC	<u>891.22</u> MC <u>901.72</u> MC <u>10.5</u> MC
4. HF Deviation Level at J4	<u>14dbm + 0.5 dbm</u>	<u>- 14</u> dbm
5. ADJUSTMENT OF FOUR RECEIVERS		<u>R.S.K.</u> Initials
6. LF DEVIATION Signal Level at J14	<u>10dbm + 0.5dbm</u>	<u>- 10</u> dbm
7. ORDER WIRE DEVIATION & LEVEL Output at J26-J27	<u>10dbm + 0.5dbm</u>	<u>- 10</u> dbm
8. PILOT TONE LEVEL AND DEVIATION Radio Pilot Level J51 Deviation at J14 on SI893	20 to 35 volts <u>-20 dbm + 0.5 dbm</u>	<u>21</u> volts <u>- 20</u> dbm
9. DUAL MODULATOR OPERATION Exciter No. 1 Driving Exciter No. 2 Driving		<u>R.S.K.</u> Initials <u>R.S.K.</u> Initials

DATE 3 Dec. 1963TESTER [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE [Signature]GEEIA [Signature]

8-2

FEDERAL ELECTRIC CORPORATION

BR11/71

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 STATION TEST

Transmission Path: From Station TKG to STATION TID

Exciter Serial No. 003 Frequency 774.95990 MC

AN/FRC-39 EXCITER, RADIO

	EXPECTED	ACTUAL
1. POWER OUTPUT		
Power Output	Minimum 10 watts	<u>11.0</u> watts
2. CARRIER FREQUENCY		
Frequency	.001% of assigned	<u>774.96170</u> MC
3. EXCITER RESPONSE AND DEVIATION		
Lower 1 db point		<u>-3.841</u> MC
Upper 1 db point		<u>+4.043</u> MC
Bandwidth	Minimum 6.0 MC	<u>7.884</u> MC
4. HF Deviation		
Level at J4	<u>14dbm + 0.5 dbm</u>	<u>14.0</u> dbm
5. ADJUSTMENT OF FOUR RECEIVERS	Ser.NO.006 Ser.NO.005	<u>[Signature]</u> Initials
6. LF DEVIATION		
Signal Level at J14	<u>10dbm + 0.5dbm</u>	<u>10.0</u> dbm
7. ORDER WIRE DEVIATION & LEVEL		
Output at J26-J27	<u>10dbm + 0.5dbm</u>	<u>10.0</u> dbm
8. PILOT TONE LEVEL AND DEVIATION		
Radio Pilot Level J51	20 to 35 volts	<u>25.0</u> volts
Deviation at J14 on S1893	-20 dbm + 0.5 dbm	<u>-20.0</u> dbm
9. DUAL MODULATOR OPERATION		
Exciter No. 1 Driving		<u>*</u> Initials
Exciter No. 2 Driving		<u>*</u> Initials

* Test not performed-OUT OF SPEC.DATE December 1963TESTER [Signature]SUPERVISOR William R. BurbridgeQUALITY ASSURANCE Joseph MalbowitzGEEIA Donald A. Holmes

8-3

FEDERAL ELECTRIC CORPORATION

BR11/71

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 STATION TEST

Transmission Path: From Station TKG to STATION TKG
Exciter Serial No. 004 Frequency 774.95990 MC

AN/FRC-39 EXCITER, RADIO

	EXPECTED	ACTUAL
1. POWER OUTPUT Power Output	Minimum 10 watts	<u>10.5</u> watts
2. CARRIER FREQUENCY Frequency	.001% of assigned	<u>774.958976</u> MC
3. EXCITER RESPONSE AND DEVIATION Lower 1 db point Upper 1 db point Bandwidth	Minimum 6.0 MC	<u>66.558</u> MC <u>73.442</u> MC <u>6.884</u> MC
4. HF Deviation Level at J4	<u>14dbm + 0.5 dbm</u>	<u>14.0</u> dbm
5. ADJUSTMENT OF FOUR RECEIVERS	Ser.NO.007 Ser.NO.008	<u>[Signature]</u> Initials
6. LF DEVIATION Signal Level at J14	<u>10dbm + 0.5dbm</u>	<u>10.0</u> dbm
7. ORDER WIRE DEVIATION & LEVEL Output at J26-J27	<u>10dbm + 0.5dbm</u>	<u>10.0</u> dbm
8. PILOT TONE LEVEL AND DEVIATION Radio Pilot Level J51 Deviation at J14 on S1893	20 to 35 volts -20 dbm + 0.5 dbm	<u>23.5</u> volts <u>-20.0</u> dbm
9. DUAL MODULATOR OPERATION Exciter No. 1 Driving Exciter No. 2 Driving		<u>*</u> Initials <u>*</u> Initials

* Test not performed-OUT OF SPEC.

DATE 4 December 1963TESTER [Signature]SUPERVISOR William K. ReddyQUALITY ASSURANCE Joseph MalbouinGEEIA Gerald A. Hartman

8-4

FEDERAL ELECTRIC CORPORATION

BR 11/72

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 STATION TEST

STATION T.I.D.

Transmission Path: From Station T.I.D. to STATION T. K.G.

Amplifier Serial No. # 001 Frequency 8 95.92 MC

Exciter Serial No. # 001

AN/FRC-39 POWER AMPLIFIER, RADIO

	EXPECTED	ACTUAL
1. INPUT POWER	Min. 10 watts	<u>55.5</u> watts
2. OUTPUT FORWARD POWER	Min. 10 KW	<u>10</u> KW watts
3. OUTPUT BACK POWER	Max. 280 W	<u>15</u> watts
4. VSWR	Max. 1.40	<u>1.08</u>
5. FAULT RECYCLING		<u>R.S.K.</u> Initials
6. KLYSTRON COOLANT FLOW	Min. 17 GPM	<u>28.5</u> GPM

DATE 3 Dec. 1963

TESTER R. S. K.

SUPERVISOR J. Gerst

QUALITY ASSURANCE Esteban E. K.

GEEIA Ralph S. Krueger

FEDERAL ELECTRIC CORPORATION

BR 11/72

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 STATION TEST

STATION T.I.D.Transmission Path: From Station #### T.I.D. to STATION T.K.G.Amplifier Serial No. # 002 Frequency 895.92 MCExciter Serial No. # 002

AN/FRC-39 POWER AMPLIFIER, RADIO

	EXPECTED	ACTUAL
1. INPUT POWER	Min. 10 watts	<u>9.5</u> watts
2. OUTPUT FORWARD POWER	Min. 10 KW	<u>10</u> watts
3. OUTPUT BACK POWER	Max. 280 W	<u>60</u> watts
4. VSWR	Max. 1.40	<u>1.15</u>
5. FAULT RECYCLING		<u>R.S.K.</u> Initials
6. KLYSTRON COOLANT FLOW	Min. 17 GPM	<u>30</u> GPM

DATE # 3 Dec. 1963TESTER [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE [Signature]GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION

BR 11/72

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 STATION TEST

STATION TKGTransmission Path: From Station TKG to STATION TIDAmplifier Serial No. 003 Frequency 774.95990 MCExciter Serial No. 004

AN/FRC-39 POWER AMPLIFIER, RADIO

	EXPECTED	ACTUAL
1. INPUT POWER	Min. 10 watts	<u>* 6.0</u> watts
2. OUTPUT FORWARD POWER	Min. 10 KW	<u>10.0 K</u> watts
3. OUTPUT BACK POWER	Max. 280 W	<u>190</u> watts
4. VSWR	Max. 1.40	<u>1.32</u>
5. FAULT RECYCLING		<u>M.P. 7</u> Initials
6. KLYSTRON COOLANT FLOW	Min. 17 GPM	<u>31</u> GPM

* OUT OF SPEC.DATE 20 December 1963TESTER [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE [Signature]GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION

BR 11/72

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 STATION TEST

STATION TKGTransmission Path: From Station TKG to STATION TIDAmplifier Serial No. 004 Frequency 774.95990 MCExciter Serial No. 003

AN/FRC-39 POWER AMPLIFIER, RADIO

	EXPECTED	ACTUAL
1. INPUT POWER	Min. 10 watts	<u>*5.5</u> watts
2. OUTPUT FORWARD POWER	Min. 10 KW	<u>10.0 K</u> watts
3. OUTPUT BACK POWER	Max. 280 W	<u>80</u> watts
4. VSWR	Max. 1.40	<u>1.20</u>
5. FAULT RECYCLING		<u>AKB</u> Initials
6. KLYSTRON COOLANT FLOW	Min. 17 GPM	<u>28</u> GPM

* OUT-OF-SPEC.

DATE 12 December 1963TESTER [Signature]SUPERVISOR William J. BurdickQUALITY ASSURANCE James M. McHenryGEEIA Gerald A. Nelson

FEDERAL ELECTRIC CORPORATION

BR II/73 Rev.

BIG RALLY II PROJECT

DATA SHEET
AN/FRC-39 STATION TESTS

STATION T.I.D.TRANSMISSION PATH: Station T.K.G. to STATION T.I.D.

1. Receiver Gain
Parametric Amplifier and Converter

#001 Rec 1 V	#002 Rec 2 H	#003 Rec 3 V	#004 Rec 4 H
-----------------	-----------------	-----------------	-----------------

Required: Minimum 40
2. Receiver Sensitivity (20db Quieting Level)

V Rec#001	H Rec#002	V Rec#003	H Rec#004
--------------	--------------	--------------	--------------

Required: Maximum 4.5uv

2.5	2.5	2.7	2.4
-----	-----	-----	-----

3. DC Control Voltages

Rec#001	Rec#002	Rec#003	Rec#004
---------	---------	---------	---------

DC Control Voltage Req. -45 Volts

-45	-45	-45	-45
-----	-----	-----	-----

4. Diversity Combiner

V Rec#001	H Rec#002	V Rec#003	H Rec#004
--------------	--------------	--------------	--------------

Vertical Receiver Outputs (no inputs)

1V	2H		
----	----	--	--

Required: Maximum Difference 2db

-15	-14.5
-----	-------

Vertical Receiver Outputs (30db quieting
Ref:

44.5 -45	-45.5
------------------------	-------

Combined (Vert.)

Required: 1.5 to 4.5db less than
individual receiver

-47	-47.5
-----	-------

Horizontal Receiver Outputs (no inputs)

Rec 3 V

Rec 4 H

Required: Maximum Difference 2db

- 14.5

- 15

Horizontal Receiver Outputs (30db quieting-Ref)

* 47

* 47

Required: 1.5 to 4.5db less than
individual receiver

- 49

- 49

5. Receiver Pilot Tone Operation Test R.S.K.initial

6. Antenna System VSWR

Required: Maximum 1.40

VERT.

HOIZ.

Antenna 1

1.19

1.22 &

Antenna 2

1.28

1.22

Date 3 Dec. 1963

Tester *W. E. Carter*

Supervisor *J. B. Gurst*

Quality Assurance *Patrick Hunt*

GEEIA *Ralph S. Kruger*

FEDERAL ELECTRIC CORPORATION

BR11/73REV.

BIG RALLY 11 PROJECT

DATA SHEET

AN/FRC-39 STATION TESTS

TRANSMISSION PATH: STATION <u>TKG</u> TO STATION <u>TID</u>		STATION <u>TKG</u>			
1. Receiver Gain		REC <u>1V</u>	REC <u>2H</u>	REC <u>3V</u>	REC <u>4H</u>
Parametric Amplifier and Converter		----	----	----	----
Required: Minimum 40db		<u>40.4db</u>	<u>40.2db</u>	<u>40.5db</u>	<u>40.3</u>
2. Receiver Sensitivity(20db Quieting Level)		REC <u>1V</u>	REC <u>2H</u>	REC <u>3V</u>	REC <u>4H</u>
		----	----	----	----
Required: Maximum 4.5uv		<u>2.7</u>	<u>2.8</u>	<u>2.9</u>	<u>2.6</u>
3. DC Control Voltage		REC <u>1V</u>	REC <u>2H</u>	REC <u>3V</u>	REC <u>4H</u>
DC Control Volts		----	----	----	----
Required: -45 Volts		<u>-45.0</u>	<u>-45.0</u>	<u>-45.0</u>	<u>-45.0</u>
4. Diversity Combiner					
Vertical Receiver Outputs (no input)		REC <u>1V</u>	REC <u>2H</u>		
Required; Maximum Difference 2db		<u>+8.0db</u>	<u>+7.2db</u>		
Vertical Receiver Outputs (30dv quieting-Ref)		<u>-20.0</u>	<u>-22.8</u>		
Combined (Vertical)					
Required: 1.5 to 4.5db less than					
individual receivers		<u>2.5</u>	<u>3.7</u>		

Horizontal Receiver Outputs (no input)

Required: Maximum Difference 2db

REC 3V	REC 4H
<u>+8.0</u>	<u>+9.5</u>

Horizontal Receiver Outputs (30 db Quieting-ref)

Combined (Horiz.)

Required: 1.5 to 4.5db less than individual receivers

<u>-22.0</u>	<u>-21.5</u>
<u>4db</u>	<u>3db</u>

5. Receiver Pilot Tone Operation Test *[Signature]* initial

6. Antenna System VSWR

Required: Maximum 1.40

Antenna 1

Antenna 2

VERT. 7	HORIZ.
<u>* 1.27</u>	<u>1.35</u>
<u>1.27</u>	<u>1.35</u>

* OUT OF SPEC.

DATE 5 December 1963
 TESTER *[Signature]*
 SUPERVISOR *[Signature]*
 QUALITY ASSURANCE *[Signature]*
 GEEIA *[Signature]*

FEDERAL ELECTRIC CORPORATION

BR11/74

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 OVERALL TEST

STATION T.I.D.

Transmission Path: From T.K.G. Station to T.I.D. Station

Exciter Serial No. # 001

Serial No. Receiver A # 001 V Receiver B # 002 H

Power Amplifier Serial No. # 001

EXPECTED

ACTUAL

1. SYSTEM INTERMODULATION

Frequency
15 KC
55 KC
80 KC
475 KC

Maximum -55 dbm
Maximum -55 dbm
Maximum -55 dbm
Maximum -55 dbm

1 V	2 H
Rec. A	Rec. B
- 55	-50 dbm
- 53	- 53 dbm
- 51	- 51 dbm
- 54	- 52 dbm

2. RADIO BASEBAND FREQUENCY RESPONSE

Frequency
12 KC
20 KC
30 KC
40 KC
50 KC
60 KC

EXPECTED

-2 + 1 dbm
with
respect
to 30 KC
level

ACTUAL

Rec. A	Rec. B
- 11.8	- 11.8 dbm
- 11	- 11.2 dbm
- 10.7	- 10.8 dbm
- 10.6	- 10.8 dbm
- 10.6	- 10.7 dbm
- 10.6	- 10.6 dbm

64 KC
150 KC
308 KC
450 KC
552 KC

+ 0.25 dbm
per 250 KC
of frequency
Change with respect
to 64 KC

- 10	- 10 dbm
- 10.1	- 10 dbm
- 10.2	- 10.2 dbm
- 10.25	- 10.25 dbm
- 10.3	- 10.25 dbm

DATE Dec. 2, 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEIA Ralph L. Krueger 8-13

FEDERAL ELECTRIC CORPORATION

BR11/74

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 OVERALL TEST

STATION T.I.D.

Transmission Path: From T.K.G. Station to T.I.D. Station

Exciter Serial No. # 002

Serial No. Receiver A # 003 #V 3 Receiver B # 004 #X 4 H

Power Amplifier Serial No. # 002

EXPECTED

ACTUAL

1. SYSTEM INTERMODULATION

Frequency
15 KC
55 KC
80 KC
475 KC

Maximum -55 dbm
Maximum -55 dbm
Maximum -55 dbm
Maximum -55 dbm

3V Rec. A	4 H Rec. B
- 50	- 51 dbm
- 57	- 54 dbm
- 51	- 50 dbm
- 54	- 50 dbm

2. RADIO BASEBAND FREQUENCY RESPONSE

Frequency
12 KC
20 KC
30 KC
40 KC
50 KC
60 KC

EXPECTED

-2 + 1 dbm
with
respect
to 30 KC
level.

3 V Rec. A	4 H Rec. B
- 11	- 11 dbm
- 10.25	- 11.3 dbm
- 10	- 10 dbm
- 9.8	- 10 dbm
- 9.5	- 10 dbm
- 9.5	- 10 dbm

64 KC
150 KC
308 KC
450 KC
552 KC

± 0.25 dbm
per 250 KC
of frequency
Change with respect
to 64 KC

- 10	- 10 dbm
- 9.8	- 10 dbm
- 9.8	- 10.2 dbm
- 9.9	- 10.3 dbm
- 9.8	- 10.3 dbm

DATE 5 Dec. 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION

BR11/74

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 OVERALL TEST

STATION TKG

Transmission Path: From TKG Station to TID Station

Exciter Serial No. 003

Serial No. Receiver A 005 (1H) Receiver B# 006 (2H)

Power Amplifier Serial No. 003

EXPECTED

ACTUAL

1. SYSTEM INTERMODULATION

Frequency

15 KC

55 KC

80 KC

475 KC

Rec. A

-41.0 Maximum -55 dbm

-35.0 Maximum -55 dbm

-31.0 Maximum -55 dbm

-31.0 Maximum -55 dbm

Rec. A

Rec. B

* * dbm

* * dbm

* * dbm

* * dbm

2. RADIO BASEBAND FREQUENCY RESPONSE

EXPECTED

ACTUAL

Frequency

12 KC

20 KC

30 KC

40 KC

50 KC

60 KC

-2 + 1 dbm
with
respect
to 30 KC
level

Rec. A

Rec. B

-11.8 -11.5 dbm

-10.8 -10.6 dbm

-10.2 -10.0 dbm

-09.7 -09.7 dbm

-09.3 -09.2 dbm

* -09.0 -08.9 dbm

64 KC

150 KC

308 KC

450 KC

552 KC

+ 0.25 dbm
per 250 KC
of frequency
Change with respect
to 64 KC

-10.25 -10.2 dbm

-10.25 -10.2 dbm

-10.40 -10.3 dbm

-10.50 -10.4 dbm

-10.50 -10.4 dbm

* Test not performed-OUT OF SPEC.

DATE 5 December 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

Q-15 GEBIA [Signature]

FEDERAL ELECTRIC CORPORATION

BR11/74

BIG RALLY II PROJECT

DATA SHEET

AN/FRC-39 OVERALL TEST

STATION TKGTransmission Path: From TKG Station to TID StationExciter Serial No. 004Serial No. Receiver A 007 (3V) Receiver B# 008 (4H)Power Amplifier Serial No. ----- 003

EXPECTED

ACTUAL

1. SYSTEM INTERMODULATION

Frequency

15 KC

55 KC

80 KC

475 KC

REC. A | REC. B

-47.0 | -52.0

-42.0 | -50.0

-41.0 | -45.0

-41.0 | -40.0

Maximum -55 dbm

Maximum -55 dbm

Maximum -55 dbm

Maximum -55 dbm

Rec. A | Rec. B

* | * dbm

* | * dbm

* | * dbm

* | * dbm

2. RADIO BASEBAND FREQUENCY RESPONSE

EXPECTED

ACTUAL

Frequency

12 KC

20 KC

30 KC

40 KC

50 KC

60 KC

-2 + 1 dbm
with
respect
to 30 KC
level

Rec. A | Rec. B

-11.1 | -11.3 dbm

-10.2 | -10.6 dbm

-10.0 | -10.2 dbm

-09.9 | -10.1 dbm

-09.9 | -10.1 dbm

-09.9 | -10.1 dbm

64 KC

150 KC

308 KC

450 KC

552 KC

± 0.25 dbm
per 250 KC
of frequency
Change with respect
to 64 KC

-10.1 | -10.3 dbm

-10.0 | -10.1 dbm

-10.1 | -10.2 dbm

-10.1 | -10.0 dbm

-10.2 | 10.0 dbm

* Test not performed-OUT OF SPEC.DATE 5 December 1963TESTER [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE [Signature]GEBI [Signature]

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APPENDIX

The below data is in reference to the System Intermodulation check performed at site TKG using Receiver "A" Ser. No. 007 and Power Amplifier Ser. No. 003.

Intermod. into the dummy load at 10.0KW power out, with reflected power at 55.0 watts.

FREQUENCY

15 KC
55 KC
80 KC
475 KC

REC. "A"

-51 dbm
-51 dbm
-54 dbm
-54 dbm

DATE 19 December 1963

TESTER [Signature]

SUPERVISOR William R. Burdridge

QUALITY ASSURANCE Joseph Malbowitz

Intermod. into antenna C-2 at 10.0KW power out, with reflected power at 190 watts.

FREQUENCY

15 KC
55 KC
80 KC
475 KC

REC. "A"

-41 dbm
-35 dbm
-31 dbm
-31 dbm

DATE 20 December 1963

TESTER [Signature]

SUPERVISOR William R. Burdridge

QUALITY ASSURANCE Joseph Malbowitz

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/FRC-39 LINK TEST

BR 11/75

		STATION	T.I.D.
Transmission Path:	From T.K.G.	Station to	T.I.D.
V. Exc. Serial No.	# 001	V. Rec. Serial No.	# 001
H. Exc. Serial No.	# 002	V. Rec. Serial No.	# 003
V. P. A. No.	# 001	H. Rec. Serial No.	# 002
H. P. A. No.	# 002	H. Rec. Serial No.	# 004
V. Trans. Ant. No.	# 1		
H. Trans. Ant. No.	# 2		

1. RADIO NOISE AND SPURIOUS TONE LEVELS

	EXPECTED
Baseband Noise	-60 dbm
NO NOISE GREATER THAN - 64 dbm	

ACTUAL	
Freq.	Noise Level
_____ KC	_____ dbm
_____ KC	_____ dbm
_____ KC	_____ dbm
_____ KC	_____ dbm
_____ KC	_____ dbm
_____ KC	_____ dbm

NOTE: Record all noise signals greater than -60 dbm, except 60 KC will not be recorded.

2. RADIO BASEBAND FREQUENCY RESPONSE

FREQUENCY	EXPECTED
12 KC	
20 KC	-2 + 1 dbm
30 KC	with
40 KC	respect
50 KC	to 30 KC
60 KC	level

64 KC	
150 KC	+ 0.25 dbm
308 KC	per 250 KC
450 KC	of frequency
552 KC	change with respect
	to 64 KC

ACTUAL	
= 10.8	dbm
- 9.7	dbm
- 9.4	dbm
- 9.7	dbm
- 9.7	dbm
- 10	dbm

- 9.7	dbm
- 10	dbm
- 10	dbm
- 9.7	dbm
- 10	dbm

DATE 7 Dec. 1963
TESTER *[Signature]*
SUPERVISOR *[Signature]*
QUALITY ASSURANCE *[Signature]*
GEEIA *[Signature]*
R-16

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
AN/FRC-39 LINK TEST

BR 11/75

Transmission Path:	From	TKG	Station to	TID	STATION	TKG	Station
V. Exc. Serial No.	004		V. Rec. Serial No.	005			
H. Exc. Serial No.	003		V. Rec. Serial No.	007			
V. P. A. No.	003		H. Rec. Serial No.	006			
H. P. A. No.	N/A		H. Rec. Serial No.	008			
V. Trans. Ant. No.	C-2						
H. Trans. Ant. No.	C-1						

1. RADIO NOISE AND SPURIOUS TONE LEVELS

EXPECTED

Baseband Noise

-60 dbm

Baseband scanned, no levels found
greater than -60dbm. (PA#004)

ACTUAL

Freq. Noise Level

N/A	KC	N/A	dbm
N/A	KC	N/A	dbm
N/A	KC	N/A	dbm
N/A	KC	N/A	dbm
N/A	KC	N/A	dbm
N/A	KC	N/A	dbm

NOTE: Record all noise signals greater than -60 dbm, except 60 KC
will not be recorded.

2. RADIO BASEBAND FREQUENCY RESPONSE

	FREQUENCY	EXPECTED	ACTUAL
Receivers 005 007	12 KC		-11.0 dbm
	20 KC	-2 + 1 dbm	-10.3 dbm
	30 KC	with	-10.2 dbm
	40 KC	respect	-09.5 dbm
	50 KC	to 30 KC	-09.5 dbm
	60 KC	level	-09.5 dbm
			-10.0 dbm
	64 KC		-09.8 dbm
	150 KC	+ 0.25 dbm	-09.8 dbm
	308 KC	per 250 KC	-09.7 dbm
	450 KC	of frequency	** -09.7 dbm
	552 KC	change with respect	** -09.6 dbm
		to 64 KC	

** Fluctuations in readings over 1db peak/peak

DATE 12 December 1963

TESTER *[Signature]*

SUPERVISOR *[Signature]*

QUALITY ASSURANCE *[Signature]*

GEEIA *[Signature]*

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
150 KW POWER GENERATING SYSTEM

BRH/101

STATION T.I.D. North Van

1. FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency

60 cps

A. Steady State Load

Minimum Frequency Reading

60 cps

Maximum Frequency Reading

59 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency

59 cps

Maximum Frequency

60 cps

Recovery Time

2 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency~~

~~_____ cps~~

~~Maximum Frequency~~

~~_____ cps~~

~~Recovery Time~~

~~_____ Seconds~~

Generator II

Name Plate Frequency

60 cps

A. Steady State Load

Minimum Frequency Reading

60 cps

Maximum Frequency Reading

61 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency

60 cps

Maximum Frequency

61 cps

Recovery Time

2 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency~~

~~_____ cps~~

~~Maximum Frequency~~

~~_____ cps~~

~~Recovery Time~~

~~_____ Seconds~~

DATE 26 Nov. 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

Walter L. O'Neil

FEDERAL ELECTRIC CORPORATION BR11/102
BIG RALLY II PROJECT
DATA SHEET
150 KW POWER GENERATING SYSTEM

STATION T.I.D. North Van

2. LOAD BALANCE (See Para. 8)

Generator <u>I</u>	<u>Test I</u>	<u>Test II (Corrected Unbalance)</u>
Phase I		
Amperes	<u>359</u>	_____
Volts	<u>120</u>	_____
Volts x Amperes	<u>43,080</u>	_____
Phase II		
Amperes	<u>370</u>	_____
Volts	<u>120</u>	_____
Volts x Amperes	<u>44,400</u>	_____
Phase III		
Amperes	<u>340</u>	_____
Volts	<u>120</u>	_____
Volts x Amperes	<u>40,800</u>	_____
Generator II		
Phase I		
Amperes	<u>315</u>	_____
Volts	<u>120</u>	_____
Volts x Amperes	<u>37,800</u>	_____
Phase II		
Amperes	<u>322</u>	_____
Volts	<u>120</u>	_____
Volts x Amperes	<u>38,640</u>	_____
Phase III		
Amperes	<u>305</u>	_____
Volts	<u>120</u>	_____
Volts x Amperes	<u>36,600</u>	_____

DATE 26m Nov. 1963

TESTER Robert C. Mendenhall

SUPERVISOR Harold E. Carter

QUALITY ASSURANCE Robert C. Mendenhall

Geeia. Walter H. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
150 KW POWER GENERATION SYSTEM

BRH/103

STATION TID NORTH VAN

3. PHASING (See Para. 9)

Generator I

Phase I	<u>120</u> volts
Phase II	<u>120</u> volts
Phase III	<u>120.5</u> volts

Generator II

Phase I	<u>120</u> volts
Phase II	<u>120</u> volts
Phase III	<u>120.5</u> volts

4. NEUTRAL GROUNDING (See Para. 10)

Generator I

Ground Rod to Neutral Terminal .5 OHMS

Generator II

Ground Rod to Neutral Terminal .5 OHMS

DATE

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIA

26 Nov 1963
D. C. Mohr
Russell E. Carter
Arthur D. Hunt
Walter L. Gray

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
150 KW DIESEL GENERATOR SYSTEM

BR11/104

STATION TID NORTH VAN

5. TERMINAL VOLTAGE (See Para. II)

Percent Voltage Drop $\left(\frac{\text{Generator Panel Board Voltage} - \text{Terminal Voltage}}{\text{Generator Panel Board Voltage}} \times 100\% \right)$

		3 Phase 208 Volts		
		Generator Panel Board Volt.	Term. Volts	% Volt Drop
Feeder I	Phase 1 & 2	232	231	1
	Phase 2 & 3	233	232	1
	Phase 3 & 1	231	231	
	Phase 1 to Neutral	234	134	
	Phase 2 to Neutral	132	131	1
	Phase 3 to Neutral	128	128	
Feeder II	Phase 1 & 2	231	231	
	Phase 2 & 3	233	232	1
	Phase 3 & 1	235	235	
	Phase 1 to Neutral	133	133	
	Phase 2 to Neutral	131	130	1
	Phase 3 to Neutral	134	133	1
Feeder III	Phase 1 & 2	231	231	
	Phase 2 & 3	232	231	
	Phase 3 & 1	231	231	
	Phase 1 to Neutral	133	132	
	Phase 2 to Neutral	132	132	
	Phase 3 to Neutral	134	134	

DATE

26 Nov 1963

TESTER

Russell E. Carter

SUPERVISOR

Russell E. Carter

QUALITY ASSURANCE

Walter D. Craig

GEEIA

Walter D. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
150 KW POWER GENERATING SYSTEM

BR11/105

STATION TID NORTH VAN

6. GENERATOR TRANSFER OPERATION (See Para. 12)

Generator I

	Normal Operating Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>120</u>	<u>120 120 120</u>
Amperage	<u>400 410 357</u>	<u>420 430 370</u>
Wattage	<u>120</u>	<u>135 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 2 seconds.

Generator II

	Normal Operating Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>121 122 121</u>	<u>120 122 122</u>
Amperage	<u>280 250 220</u>	<u>320 295 250</u>
Wattage	<u>95</u>	<u>95</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 2 seconds.

DATE 26 Nov 1963
TESTER Robert C. M. [Signature]
SUPERVISOR Russell E. [Signature]
QUALITY ASSURANCE Patrick J. [Signature]
GEEIA Walter J. [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
150 KW DIESEL GENERATING SYSTEM

BRII/106

STATION TID NORTH VAN

7. PARALLELING TEST (See Para. 13)

Generator I (After Paralleling)

Amps	<u>420</u>	Amps
Watts	<u>120 KW</u>	Watts
Volts	<u>120</u>	Volts
Frequency	<u>60</u>	CPS
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>430</u>	Amps
Watts	<u>135 KW</u>	Watts
Volts	<u>120</u>	Volts
Frequency	<u>60</u>	CPS
Tachometer Reading	_____	RPM

DATE 26 Nov 1963

TESTER Dexter C. M. [Signature]

SUPERVISOR Russell E. Carter

QUALITY ASSURANCE Frederick H. [Signature]

GEEIA Whitney [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
150 KW POWER GENERATING SYSTEM

BRII/101

STATION TID SOUTH VAN

1. FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 59 cps
Maximum Frequency 61 cps
Recovery Time 2 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency cps~~
~~Maximum Frequency cps~~
~~Recovery Time Seconds~~

Generator II

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 59 cps
Maximum Frequency 61 cps
Recovery Time 2 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency cps~~
~~Maximum Frequency cps~~
~~Recovery Time Seconds~~

DATE 26 November 1963

TESTER Dexter C. Mahert

SUPERVISOR Charles E. Carter

QUALITY ASSURANCE Forrest G. Hunt

GEEIA Walter L. Craig

FEDERAL ELECTRIC CORPORATION BRH/102

BIG RALLY II PROJECT

DATA SHEET

150 KW POWER GENERATING SYSTEM

STATION TID Scary Van

2. LOAD BALANCE (See Para. 8)

Generator <u>I</u>	Test I	Test II (Corrected Unbalance)
Phase I		
Amperes	<u>318</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>38,160</u>	<u> </u>
Phase II		
Amperes	<u>320</u>	<u> </u>
Volts	<u>122</u>	<u> </u>
Volts x Amperes	<u>39040</u>	<u> </u>
Phase III		
Amperes	<u>241</u>	<u> </u>
Volts	<u>122</u>	<u> </u>
Volts x Amperes	<u>288 29402</u>	<u> </u>
Generator II		
Phase I		
Amperes	<u>305</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>36600</u>	<u> </u>
Phase II		
Amperes	<u>305</u>	<u> </u>
Volts	<u>121</u>	<u> </u>
Volts x Amperes	<u>36905</u>	<u> </u>
Phase III		
Amperes	<u>330</u>	<u> </u>
Volts	<u>121</u>	<u> </u>
Volts x Amperes	<u>39930</u>	<u> </u>

DATE 26 November 1963TESTER Dexter C. MohrSUPERVISOR Russell E. CarterQUALITY ASSURANCE Patrick J. Hunt

GEEIA

Carter L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
150 KW POWER GENERATION SYSTEM

BRH/103

STATION TID SOUTH VAN

3. PHASING (See Para. 9)

Generator I

Phase I	<u>120.5</u> volts
Phase II	<u>120</u> volts
Phase III	<u>120.5</u> volts

Generator II

Phase I	<u>120.5</u> volts
Phase II	<u>120</u> volts
Phase III	<u>120.5</u> volts

4. NEUTRAL GROUNDING (See Para. 10)

Generator I

Ground Rod to Neutral Terminal .2 OHMS

Generator II

Ground Rod to Neutral Terminal .2 OHMS

DATE 26 November 1963

TESTER Robert C. Mahant

SUPERVISOR Russell E. Carter

QUALITY ASSURANCE Arturo R. Hunt

GEEIA Walter L. Craig

FEDERAL ELECTRIC CORPORATION

BRH/104

BIG RALLY II PROJECT

DATA SHEET

150 KW DIESEL GENERATOR SYSTEM

STATION TID SOUTH VAN

5. TERMINAL VOLTAGE (See Para. II)

Percent Voltage Drop $\left(\frac{\text{Generator Panel Board Voltage} - \text{Terminal Voltage}}{\text{Generator Panel Board Voltage}} \times 100\% \right)$

3 Phase 208 Volts

		Generator Panel Board Volt.	Term. Volts	% Volt Drop
Feeder I	Phase 1 & 2	210	210	
	Phase 2 & 3	209	211	1%
	Phase 3 & 1	213	213	
	Phase 1 to Neutral	120	121	8%
	Phase 2 to Neutral	118	117	1%
	Phase 3 to Neutral	121	120	1%
Feeder II	Phase 1 & 2	212	210	1%
	Phase 2 & 3	212	212	
	Phase 3 & 1	213	213	
	Phase 1 to Neutral	121	121	
	Phase 2 to Neutral	118	117	1%
	Phase 3 to Neutral	121	121	
Feeder III	Phase 1 & 2	212		
	Phase 2 & 3	212		
	Phase 3 & 1	213		
	Phase 1 to Neutral	120		
	Phase 2 to Neutral	118		
	Phase 3 to Neutral	121		

DATE 26 November 1963TESTER Robert C. MahanSUPERVISOR Russell E. CarterQUALITY ASSURANCE Patrick H. Hunt

GEEIA

Walter L. Gray

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
150 KW POWER GENERATING SYSTEM

BRH/105

STATION TID SOUTH VAN

6. GENERATOR TRANSFER OPERATION (See Para. 12)

Generator I

	Normal Operating Conditions			Conditions New Duty Unit After Transfer		
Voltage	121	121	122	121	121	122
Amperage	310	350	370	310	350	370
Wattage	115 KW			115 KW		
Frequency	60 cps			60 cps		

Time in Seconds to Effect Transfer 6 seconds.

Generator II

	Normal Operating Conditions			Conditions New Duty Unit After Transfer		
Voltage	121	121	122	121	121	122
Amperage	310	350	370	310	350	370
Wattage	115 KW			115 KW		
Frequency	60 cps			60 cps		

Time in Seconds to Effect Transfer 7 seconds.

DATE 26 November 1963

TESTER Donald C. Mahall

SUPERVISOR Russell E. Carter

QUALITY ASSURANCE Derrick H. Hunt

GEEIA

Walter L. Craig

FEDERAL ELECTRIC CORPORATION

BRII/106

BIG RALLY II PROJECT

DATA SHEET

150 KW DIESEL GENERATING SYSTEM

STATION T ID SOUTH VAN

7. PARALLELING TEST (See Para. 13)

Generator I (After Paralleling)

Amps	<u>310 380 350</u>	Amps
Watts	<u>118 KW</u>	Watts
Volts	<u>121 120 121</u>	Volts
Frequency	<u>60 cps</u>	CPS
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>320 370 400</u>	Amps
Watts	<u>115 KW</u>	Watts
Volts	<u>118 120 120</u>	Volts
Frequency	<u>60</u>	CPS
Tachometer Reading	_____	RPM

- * A salt water dummy load was used for this test which accounts for the different readings after paralleling the units.

DATE 26 November 1963

TESTER *Robert C. Mott*

SUPERVISOR *Russell E. Carter*

QUALITY ASSURANCE *Patrick H. Hunt*

GEEIA *Walter J. Craig*

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW POWER GENERATING SYSTEM

BRH/111

STATION TAL

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 60 cps
Maximum Frequency 61 cps
Recovery Time 3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency~~ ~~_____~~ cps
~~Maximum Frequency~~ ~~_____~~ cps
~~Recovery Time~~ ~~_____~~ Seconds

Generator II

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 60 cps
Maximum Frequency 61 cps
Recovery Time 2 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency~~ ~~_____~~ cps
~~Maximum Frequency~~ ~~_____~~ cps
~~Recovery Time~~ ~~_____~~ Seconds

DATE 28 NOV. 1963

TESTER Robert E. Hest

SUPERVISOR Raymond

QUALITY ASSURANCE Walter L. Craig

GEETA

FEDERAL ELECTRIC CORPORATION

BRU/112

BIG RALLY II PROJECT

DATA SHEET

60 KW POWER GENERATING SYSTEM

STATION TAL

LOAD BALANCE (See Para. 8)

Generator ~~K~~ 2

	<u>Test I</u>	<u>Test II</u> (Corrected Unbalance)
Phase I		
Amperes	<u>65</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>7800</u>	<u> </u>
Phase II		
Amperes	<u>70</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>8400</u>	<u> </u>
Phase III		
Amperes	<u>80</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>9600</u>	<u> </u>

Generator ~~KX~~ 1

Phase I		
Amperes	<u>60</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>7200</u>	<u> </u>
Phase II		
Amperes	<u>90</u>	<u> </u>
Volts	<u>117</u>	<u> </u>
Volts x Amperes	<u>10530</u>	<u> </u>
Phase III		
Amperes	<u>80</u>	<u> </u>
Volts	<u>118</u>	<u> </u>
Volts x Amperes	<u>9440</u>	<u> </u>

DATE 28 NOV. 63TESTER Dustin C. MaltSUPERVISOR Kimball M. IsaQUALITY ASSURANCE H. K. M. MaltGEEIA: Walter L. Craig

FEDERAL ELECTRIC CORPORATION

BRH/113

BIG RALLY II PROJECT

DATA SHEET

60 KW POWER GENERATING SYSTEM

STATION TAL

PHASING (See Para. 9)

Generator I

Phase I	<u>120</u>	volts
Phase II	<u>117</u>	volts
Phase III	<u>118</u>	volts

Generator II

Phase I	<u>120</u>	volts
Phase II	<u>120</u>	volts
Phase III	<u>120</u>	volts

NEUTRAL GROUNDING (See Para. 10)

Generator I

Ground Rod to Neutral Terminal ZERO OHMS

Generator II

Ground Rod to Neutral Terminal ZERO OHMSDATE 28 NOV. 63TESTER *Robert C. Mohr*SUPERVISOR *Langell M. ...*QUALITY ASSURANCE *J. M. ...*GEETA. *Walter L. Craig*

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW DIESEL GENERATOR SYSTEM

BRII/114

STATION TAL

TERMINAL VOLTAGE (See Para. 11)

Percent Voltage Drop $\frac{(\text{Generator Panel Board Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panel Board Voltage}}$

<u>Single Phase 208 Volts</u>			
	<u>Generator Panel Board Voltage</u>	<u>Terminal Volts</u>	<u>% Volt Drop</u>
Transformer I	<u>N/A</u>	<u> </u>	<u> </u>
Transformer II	<u> </u>	<u> </u>	<u> </u>

<u>Three Phase 208 Volts</u>			
	<u>Generator Panel Board Voltage</u>	<u>Terminal Volts</u>	<u>% Volt Drop</u>
Phase 1 to 2	<u>212</u>	<u>210</u>	<u>2 V</u>
Phase 2 to 3	<u>212</u>	<u>212</u>	<u>0</u>
Phase 3 to 1	<u>214</u>	<u>213</u>	<u>1 V</u>
Phase 1 to Neutral	<u>130</u>	<u>129</u>	<u>1 V</u>
Phase 2 to Neutral	<u>128</u>	<u>128</u>	<u>0</u>
Phase 3 to Neutral	<u>129</u>	<u>129</u>	<u>0</u>

DATE 28 NOV. 63
TESTER Walter C. M. [Signature]
SUPERVISOR [Signature]
QUALITY ASSURANCE [Signature]
GEEIA Walter R. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW POWER GENERATOR SYSTEM

BRII/115

STATION TAL

GENERATOR TRANSFER OPERATION (See Para. 12)

Generator I

	<u>Normal Operating Conditions</u>	<u>Conditions New Duty Unit After Transfer</u>
Voltage	<u>125</u>	<u>123</u>
Amperage	<u>166</u>	<u>173</u>
Wattage	<u>47 KW</u>	<u>43 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 7 Seconds.

Generator II

	<u>Normal Operating Conditions</u>	<u>Conditions New Duty Unit After Transfer</u>
Voltage	<u>122</u>	<u>125</u>
Amperage	<u>162</u>	<u>163</u>
Wattage	<u>40 KW</u>	<u>46 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 7 Seconds.

DATE 28 NOV. 63
TESTER Isaiah C. Mobet
SUPERVISOR Don H. Misa
QUALITY ASSURANCE J. M. M. Potts
GEETA Charles L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW DIESEL GENERATING SYSTEM

BRII/116

STATION TAL

PARALLELING TEST (See Para. 13)

Generator I (After Paralleling)

Amps	<u>174</u>	Amps
Watts KW	<u>55</u>	Watts
Volts	<u>127</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>170</u>	Amps
Watts KW	<u>46</u>	Watts
Volts	<u>123</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

DATE 28 NOV. 63

TESTER *Robert C. Mohr*

SUPERVISOR *Donald Brina*

QUALITY ASSURANCE *W. H. H. H. H. H.*

GEFIA

Arthur L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET

BR11/111

60 KW POWER GENERATING SYSTEM
STATION TKR

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading
Maximum Frequency Reading

60 cps
60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency
Maximum Frequency
Recovery Time

59 cps
62 cps
3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency~~
~~Maximum Frequency~~
~~Recovery Time~~

~~cps~~
~~cps~~
~~Seconds~~

Generator II

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading
Maximum Frequency Reading

60 cps
60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency
Maximum Frequency
Recovery Time

59 cps
62 cps
3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency~~
~~Maximum Frequency~~
~~Recovery Time~~

~~cps~~
~~cps~~
~~Seconds~~

DATE 22 OCTOBER 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION

BRH/112

BIG RALLY II PROJECT

DATA SHEET

60 KW POWER GENERATING SYSTEM

STATION TKR

LOAD BALANCE (See Para. 8) THIS COULD NOT BE PREFORMED AT THIS TIME DUE
TO THE INCOMPLETE CONFIGURATION OF EQUIPMENT AND DUMMY LOADS
Generator I AT THIS SITE.

	<u>Test I</u>	<u>Test II</u> (Corrected Unbalance)
Phase I		
Amperes	_____	_____
Volts	_____	_____
Volts x Amperes	_____	_____
Phase II		
Amperes	_____	_____
Volts	_____	_____
Volts x Amperes	_____	_____
Phase III		
Amperes	_____	_____
Volts	_____	_____
Volts x Amperes	_____	_____
Generator II		
Phase I		
Amperes	_____	_____
Volts	_____	_____
Volts x Amperes	_____	_____
Phase II		
Amperes	_____	_____
Volts	_____	_____
Volts x Amperes	_____	_____
Phase III		
Amperes	_____	_____
Volts	_____	_____
Volts x Amperes	_____	_____

DATE 22 OCTOBER 1963TESTER J. H. AmericanSUPERVISOR Raymond HendersonQUALITY ASSURANCE W. J. KrellGEETA Walter Craig

9-20

FEDERAL ELECTRIC CORPORATION

BRH/113

BIG RALLY II PROJECT

DATA SHEET

60 KW POWER GENERATING SYSTEM

STATION TKR

PHASING (See Para. 9)

Generator I

Phase I	<u>120</u>	volts
Phase II	<u>120</u>	volts
Phase III	<u>120</u>	volts

Generator II

Phase I	<u>120</u>	volts
Phase II	<u>120</u>	volts
Phase III	<u>120</u>	volts

NEUTRAL GROUNDING (See Para. 10)

Generator I

Ground Rod to Neutral Terminal .2 OHMS

Generator II

Ground Rod to Neutral Terminal .2 OHMS

DATE 22 OCTOBER 1963

TESTER *[Signature]*

SUPERVISOR *[Signature]*

QUALITY ASSURANCE *[Signature]*

GEETA *[Signature]*

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW DIESEL GENERATOR SYSTEM

BRH/114

STATION TKR

TERMINAL VOLTAGE (See Para. 11)

Percent Voltage Drop $\frac{(\text{Generator Panel Board Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panel Board Voltage}}$

	<u>Single Phase 208 Volts</u>		
	<u>Generator Panel Board Voltage:</u>	<u>Terminal</u>	<u>% Volt</u>
		<u>Volts</u>	<u>Drop</u>
Transformer I	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Transformer II	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

	<u>Three Phase 208 Volts</u>		
	<u>Generator Panel Board Voltage:</u>	<u>Terminal</u>	<u>% Volt</u>
		<u>Volts</u>	<u>Drop</u>
Phase 1 to 2	<u>200 Volts</u>	<u>198</u>	<u>1%</u>
Phase 2 to 3	<u>197 Volts</u>	<u>195</u>	<u>1%</u>
Phase 3 to 1	<u>195 Volts</u>	<u>192</u>	<u>1.5%</u>
Phase 1 to Neutral	<u>112 Volts</u>	<u>112</u>	<u>No Drop</u>
Phase 2 to Neutral	<u>112 Volts</u>	<u>112</u>	<u>No Drop</u>
Phase 3 to Neutral	<u>112 Volts</u>	<u>112</u>	<u>No Drop</u>

DATE 22 OCTOBER 1963
TESTER J. O. Williams
SUPERVISOR Alvin D. Dean
QUALITY ASSURANCE W. L. Ruff
GEEIA Walter Ruff

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW POWER GENERATOR SYSTEM

BRII/115

STATION TKR

GENERATOR TRANSFER OPERATION (See Para. 12)

Generator I

	<u>Normal Operating Conditions</u>	<u>Conditions New Duty Unit After Transfer</u>
Voltage	<u>120,120,120</u>	<u>120,120,120</u>
Amperage	<u>180,150,185</u>	<u>190,160,195</u>
Wattage	<u>56 KW</u>	<u>59 KW</u>
Frequency	<u>60 cps</u>	<u>60 cps</u>

Time in Seconds to Effect Transfer 17 Seconds.

Generator II

	<u>Normal Operating Conditions</u>	<u>Conditions New Duty Unit After Transfer</u>
Voltage	<u>121,121,120</u>	<u>121,121,120</u>
Amperage	<u>190,160,195</u>	<u>190,160,195</u>
Wattage	<u>59 KW</u>	<u>59 KW</u>
Frequency	<u>60 cps</u>	<u>60 cps</u>

Time in Seconds to Effect Transfer 6 Seconds.

DATE 22 OCTOBER 1963
TESTER J. O. Graham
SUPERVISOR Raymond H. Dean
QUALITY ASSURANCE Mark K. Kelly
GEEIA William C. King

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW DIESEL GENERATING SYSTEM

BRH/116

STATION TKR

PARALLELING TEST (See Para. 13)

Generator I (After Paralleling)

Amps	90, 50, 95	Amps
Watts	28.5 Kilo	Watts
Volts	121, 121, 121	Volts
Frequency	60	cps
Tachometer Reading		RPM

Generator II (After Paralleling)

Amps	85, 45, 90	Amps
Watts	26.5 Kilo	Watts
Volts	121, 121, 121	Volts
Frequency	60	cps
Tachometer Reading		RPM

DATE 20 OCTOBER 1963

TESTER *J. W. Gusham*

SUPERVISOR *James H. Dean*

QUALITY ASSURANCE *Wm. K. Bell*

GEEIA *C. Keller Craig*

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET

BRH/111

60 KW POWER GENERATING SYSTEM

STATION CHO

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading 60 cps

Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 61 59 cps

Maximum Frequency 61 cps

Recovery Time 3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency~~

~~Maximum Frequency~~

~~Recovery Time~~

~~cps~~
~~cps~~
~~Seconds~~

Generator II

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading 60 cps

Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 59 cps

Maximum Frequency 61 cps

Recovery Time 3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency~~

~~Maximum Frequency~~

~~Recovery Time~~

~~cps~~
~~cps~~
~~Seconds~~

DATE 11/21/63

TESTER Gormallen

SUPERVISOR Gormallen

QUALITY ASSURANCE William R. Webb

GEEIA ~~series~~ Walter L. Craig

FEDERAL ELECTRIC CORPORATION

BRH/112

BIG RALLY II PROJECT

DATA SHEET

60 KW POWER GENERATING SYSTEM

STATION GHO

LOAD BALANCE (See Para. 8)

Generator I

	Test I	Test II (Corrected Unbalance)
Phase I		
Amperes	<u>130</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>15600</u>	<u> </u>
Phase II		
Amperes	<u>130</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>15600</u>	<u> </u>
Phase III		
Amperes	<u>122</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>14640</u>	<u> </u>

Generator II

Phase I		
Amperes	<u>130</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>15600</u>	<u> </u>
Phase II		
Amperes	<u>130</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>15600</u>	<u> </u>
Phase III		
Amperes	<u>122</u>	<u> </u>
Volts	<u>120</u>	<u> </u>
Volts x Amperes	<u>14640</u>	<u> </u>

DATE 21 Nov 1963TESTER WomallSUPERVISOR WomallQUALITY ASSURANCE William R. WebbGEEIA Walter L. Craig

FEDERAL ELECTRIC CORPORATION

BRII/113

BIG RALLY II PROJECT

DATA SHEET

60 KW POWER GENERATING SYSTEM

STATION GHO

PHASING (See Para. 9)

Generator I

Phase I	<u>120</u>	volts
Phase II	<u>120</u>	volts
Phase III	<u>120</u>	volts

Generator II

Phase I	<u>120</u>	volts
Phase II	<u>120</u>	volts
Phase III	<u>120</u>	volts

NEUTRAL GROUNDING (See Para. 10)

Generator I

Ground Rod to Neutral Terminal 0 OHMS

Generator II

Ground Rod to Neutral Terminal 0 OHMS

DATE 11/21/63

TESTER W. M. Allen

SUPERVISOR W. M. Allen

QUALITY ASSURANCE William R. Jett

GEEIA Walter L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW DIESEL GENERATOR SYSTEM

BRII/114

STATION GHO

TERMINAL VOLTAGE (See Para. 11)

Percent Voltage Drop $\frac{(\text{Generator Panel Board Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panel Board Voltage}}$

	<u>Single Phase 208 Volts</u>		
	<u>Generator Panel Board Voltage</u>	<u>Terminal Volts</u>	<u>% Volt Drop</u>
Transformer I	_____	_____	_____
Transformer II	_____	_____	_____

	<u>Three Phase 208 Volts</u>		
	<u>Generator Panel Board Voltage</u>	<u>Terminal Volts</u>	<u>% Volt Drop</u>
Phase 1 to 2	<u>206</u>	<u>205</u>	<u>%.009</u>
Phase 2 to 3	<u>206</u>	<u>205</u>	<u>%.009</u>
Phase 3 to 1	<u>206</u>	<u>206</u>	_____
Phase 1 to Neutral	<u>120</u>	<u>120</u>	_____
Phase 2 to Neutral	<u>120</u>	<u>120</u>	_____
Phase 3 to Neutral	<u>120</u>	<u>120</u>	_____

DATE 11/21/63
TESTER Cornallin
SUPERVISOR Cornallin
QUALITY ASSURANCE William R. [Signature]
GEEIA Walter L. [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW POWER GENERATOR SYSTEM

BRII/115

STATION GHO

GENERATOR TRANSFER OPERATION (See Para. 12)

Generator I

	<u>Normal Operating Conditions</u>	<u>Conditions New Duty Unit After Transfer</u>
Voltage	<u>120</u>	<u>120</u>
Amperage	<u>128</u>	<u>128</u>
Wattage	<u>22000</u>	<u>22000</u>
Frequency	<u>60</u>	<u>60</u>
Time in Seconds to Effect Transfer <u>12</u> Seconds.		

Generator II

	<u>Normal Operating Conditions</u>	<u>Conditions New Duty Unit After Transfer</u>
Voltage	<u>120</u>	<u>120</u>
Amperage	<u>128</u>	<u>128</u>
Wattage	<u>22000</u>	<u>2200</u>
Frequency	<u>60</u>	<u>60</u>
Time in Seconds to Effect Transfer <u>10</u> Seconds.		

DATE 11/21/63
TESTER Cornwall
SUPERVISOR Cornwall
QUALITY ASSURANCE William R. 205
GEEIA Walter L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
60 KW DIESEL GENERATING SYSTEM

BRH/116

STATION GHO

PARALLELING TEST (See Para. 13)

Generator I (After Paralleling)

Amps	<u>65</u>	Amps
Watts	<u>11000</u>	Watts
Volts	<u>120</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>65</u>	Amps
Watts	<u>11000</u>	Watts
Volts	<u>120</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

DATE 11/21/63

TESTER Cornall

SUPERVISOR Cornall

QUALITY ASSURANCE William R. [Signature]

GEEIA Walter Craig

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FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRH/121

STATION G I M

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 59.5 cps
Maximum Frequency 60 cps
Recovery Time 3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency cps~~
~~Maximum Frequency cps~~
~~Recovery Time Seconds~~

Generator II

Name Plate Frequency 60 cps

A. Steady State Load

Maximum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 59.5 cps
Maximum Frequency 60 cps
Recovery Time 3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency cps~~
~~Maximum Frequency cps~~
~~Recovery Time Seconds~~

DATE 15 November 1963

TESTER G W Maller

SUPERVISOR R Allen

QUALITY ASSURANCE J. Bonnell

GEBIA Walter L Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/122

STATION G I M

PHASING (See Para. 8)

Generator I

Position I	<u>120</u>	Volts
Position II	<u>238</u>	Volts

Generator II

Position I	<u>120</u>	Volts
Position II	<u>237</u>	Volts

NEUTRAL GROUNDING (See Para. 9)

Generator I

Ground Rod to Neutral Terminal 0 OHMS

Generator II

Ground Rod to Neutral Terminal 0 OHMS

DATE 15 November 1963

TESTER C. W. Mahlen

SUPERVISOR K. Allen

QUALITY ASSURANCE J. Bracher

GEEIA W. H. L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATOR SYSTEM

BRH/123

STATION G I M

TERMINAL VOLTAGE (See Para. 10)

Percent Voltage Drop $\frac{(\text{Generator Panelboard Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panelboard Voltage}}$

		<u>Single Phase 240 Volts</u>		
		<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
MRC-80	N/A	_____	_____	_____
		<u>Single Phase 120 Volts</u>		
		<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
XXXXXX LOS				
Line 1 to Neutral		<u>117</u>	<u>116</u>	<u>.85%</u>
Line 2 to Neutral		<u>118</u>	<u>118</u>	<u>0%</u>

DATE 15 November 1963
TESTER Ed M. Mahler
SUPERVISOR R. O. Lee
QUALITY ASSURANCE J. B. Baker
GEEIA Walter H. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/124

STATION G I M

GENERATOR TRANSFER OPERATION (See Para. 11)

Generator I

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>240</u>	<u>240</u>
Amperage	<u>80</u>	<u>80</u>
Wattage	<u>17000</u>	<u>17000</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 3 Seconds.

Generator II

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>240</u>	<u>240</u>
Amperage	<u>76</u>	<u>76</u>
Wattage	<u>16500</u>	<u>16500</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 4 Seconds.

DATE 15 November 1963

TESTER W. M. Mallon

SUPERVISOR R. L. L.

QUALITY ASSURANCE J. E. Smith

GEEIA W. M. L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW DIESEL GENERATING SYSTEM

BRII/125

STATION G I M

PARALLELING TEST (See Para. 12)

Generator I (After Paralleling)

Amps	<u>32</u>	Amps
Watts	<u>8000</u>	Watts
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>32</u>	Amps
Watts	<u>8000</u>	Watts
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

DATE 15 November 1963

TESTER *Ed Maller*

SUPERVISOR *R. Allen*

QUALITY ASSURANCE *J. D. Smith*

GEBIA *Walter Craig*

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FEDERAL ELECTRIC CORPORATION

BR11/121

BIG RALLY II PROJECT

DATA SHEET

20 KW POWER GENERATING SYSTEM

STATION G T A

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cpsA. Steady State LoadMinimum Frequency Reading 60 cps
Maximum Frequency Reading 60 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency 60 cps
Maximum Frequency 61 cps
Recovery Time 3 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency cps~~
~~Maximum Frequency cps~~
~~Recovery Time Seconds~~

Generator II

Name Plate Frequency 60 cpsA. Steady State LoadMaximum Frequency Reading 60 cps
Maximum Frequency Reading 60 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency 60 cps
Maximum Frequency 61 cps
Recovery Time 3 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency cps~~
~~Maximum Frequency cps~~
~~Recovery Time Seconds~~DATE 16 November 1963TESTER G. H. HallSUPERVISOR S. B. BarrettQUALITY ASSURANCE J. R. BunchGEEIA Walter L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/122

STATION G T A

PHASING (See Para. 8)

Generator I

Position I
Position II

121 Volts
239 Volts

Generator II

Position I
Position II

120 Volts
238 Volts

NEUTRAL GROUNDING (See Para. 9)

Generator I

Ground Rod to Neutral Terminal 0 OHMS

Generator II

Ground Rod to Neutral Terminal 0 OHMS

DATE 16 November 1963

TESTER W. M. Carlson

SUPERVISOR S. B. Parrott

QUALITY ASSURANCE W. L. Craig

GEETA

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATOR SYSTEM

BRH/123

STATION GTA

TERMINAL VOLTAGE (See Para. 10)

Percent Voltage Drop $\frac{(\text{Generator Panelboard Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panelboard Voltage}}$

Single Phase 240 Volts

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
MR0080X N/A	_____	_____	_____

Single Phase 120 Volts

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
MR0080X LOS	_____	_____	_____
Line 1 to Neutral	120	119	.8%
Line 2 to Neutral	122	121	.8%

DATE 16 November 1963

TESTER Ed Mullen

SUPERVISOR G B Bawette

QUALITY ASSURANCE J. G. Gaudin

GEEIA Walter L. Gray

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRH/124

STATION G T A

GENERATOR TRANSFER OPERATION (See Para. 11)

Generator I

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>245</u>	<u>245</u>
Amperage	<u>108</u>	<u>108</u>
Wattage	<u>22000</u>	<u>22000</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 4 Seconds.

Generator II

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>245</u>	<u>245</u>
Amperage	<u>108</u>	<u>108</u>
Wattage	<u>22000</u>	<u>22000</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 5 Seconds.

DATE 16 November 1963
TESTER W. M. Mallon
SUPERVISOR G. B. Bennett
QUALITY ASSURANCE J. Boncher
GEEEA Walter L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW DIESEL GENERATING SYSTEM

BRH/125

STATION GTA

PARALLELING TEST (See Para. 12)

Generator I (After Paralleling)

Amps	<u>50</u>	Amps
Watts	<u>9000</u>	Watts
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	<u> </u>	RPM

Generator II (After Paralleling)

Amps	<u>50</u>	Amps
Watts	<u>9000</u>	Watts
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	<u> </u>	RPM

DATE 16 November 1963

TESTER C. W. Mullen

SUPERVISOR J. D. Brown

QUALITY ASSURANCE J. D. Mullen

GEEIA Walter L. Craig

FEDERAL ELECTRIC CORPORATION

BRH/121

BIG RALLY II PROJECT

DATA SHEET

20 KW POWER GENERATING SYSTEM

STATION GAG

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cpsA. Steady State LoadMinimum Frequency Reading 60 cpsMaximum Frequency Reading 60 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency 59 cpsMaximum Frequency 61 cpsRecovery Time 3 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency~~ cps~~Maximum Frequency~~ cps~~Recovery Time~~ Seconds

Generator II

Name Plate Frequency 60 cpsA. Steady State LoadMaximum Frequency Reading 60 cpsMaximum Frequency Reading 60 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency 59 cpsMaximum Frequency 61 cpsRecovery Time 3 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency~~ cps~~Maximum Frequency~~ cps~~Recovery Time~~ SecondsDATE 20 November 1963TESTER W. Mah. ConSUPERVISOR Kenneth C. RichardQUALITY ASSURANCE William R. HallGEEIA W. H. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/122

STATION GAG

PHASING (See Para. 8)

Generator I

Position I	<u>240</u>	Volts
Position II	<u>120</u>	Volts

Generator II

Position I	<u>240</u>	Volts
Position II	<u>121</u>	Volts

NEUTRAL GROUNDING (See Para. 9)

Generator I

Ground Rod to Neutral Terminal 0 OHMS

Generator II

Ground Rod to Neutral Terminal 0 OHMS

DATE 20 November 1963

TESTER C. W. Madden

SUPERVISOR Randall C. Beckwith

QUALITY ASSURANCE W. R. R. R.

GEEIA Walter H. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATOR SYSTEM

BRII/123

STATION GAG

TERMINAL VOLTAGE (See Para. 10)

Percent Voltage Drop $\frac{(\text{Generator Panelboard Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panelboard Voltage}}$

Single Phase 240 Volts

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
XXXXXX LOS	<u>239</u>	<u>238</u>	<u>0.009</u>

Single Phase 120 Volts

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
XXXXXX LOS	<u>240</u>	<u>240</u>	<u>---</u>
Line 1 to Neutral	<u>240</u>	<u>240</u>	<u>---</u>
Line 2 to Neutral	<u>120</u>	<u>120</u>	<u>---</u>

DATE 20 November 1963

TESTER C. W. Mullen

SUPERVISOR Laundel C. Packard

QUALITY ASSURANCE William R. Hall

GEEIA LeNita R. Gray

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRH/124

STATION GAG

GENERATOR TRANSFER OPERATION (See Para. 11)

Generator I

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>240</u>	<u>239</u>
Amperage	<u>92</u>	<u>92</u>
Wattage	<u>20,000</u>	<u>20,000</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 5 Seconds.

Generator II

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>240</u>	<u>240</u>
Amperage	<u>92</u>	<u>92</u>
Wattage	<u>20,000</u>	<u>20,000</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 6 Seconds.

DATE 20 November 1963

TESTER Ed Mable

SUPERVISOR Randall C. Richard

QUALITY ASSURANCE William R. Webb

GEEIA Walter R. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW DIESEL GENERATING SYSTEM

BRH/125

STATION GAG

PARALLELING TEST (See Para. 12)

Generator I (After Paralleling)

Amps	<u>39</u>	Amps
Watts	<u>7,000</u>	Watts
Volts	<u>239</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>39</u>	Amps
Watts	<u>7,000</u>	Watts
Volts	<u>239</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

DATE 20 November 1963

TESTER C. W. Mullen

SUPERVISOR Randall C. Richard

QUALITY ASSURANCE William R. Hoff

GEBIA Walter H. Raig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/121

STATION GPE

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 59 cps
Maximum Frequency 61 cps
Recovery Time 3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency _____ cps~~
~~Maximum Frequency _____ cps~~
~~Recovery Time _____ Seconds~~

Generator II

Name Plate Frequency 60 cps

A. Steady State Load

Maximum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 59 cps
Maximum Frequency 61 cps
Recovery Time 3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency _____ cps~~
~~Maximum Frequency _____ cps~~
~~Recovery Time _____ Seconds~~

DATE 11/19/63

TESTER W. J. Mallen

SUPERVISOR George E. M. M.

QUALITY ASSURANCE William R. M.

GEEIA Walter S. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/122

STATION GPE

PHASING (See Para. 8)

Generator I

Position I
Position II

210 Volts
121 Volts

Generator II

Position I
Position II

210 Volts
120 Volts

NEUTRAL GROUNDING (See Para. 9)

Generator I

Ground Rod to Neutral Terminal 0 OHMS

Generator II

Ground Rod to Neutral Terminal 0 OHMS

DATE 11/19/63

TESTER Edmond Allen

SUPERVISOR George C. Hill

QUALITY ASSURANCE William R. 200

GEEIA Walter K. King

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATOR SYSTEM

BRH/123

STATION GPE

TERMINAL VOLTAGE (See Para. 10)

Percent Voltage Drop $\frac{(\text{Generator Panelboard Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panelboard Voltage}}$

Single Phase 240 Volts

L.O.S.
MRG-80

<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
<u>240</u>	<u>239</u>	<u>%.009</u>

Single Phase 120 Volts

L.O.S.
MRC-80

Line 1 to Neutral
Line 2 to Neutral

<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
<u>120</u>	<u>120</u>	<u>none</u>
<u>120</u>	<u>120</u>	<u>"</u>

DATE 11/19/63

TESTER Ed Mahlen

SUPERVISOR George C. Mc

QUALITY ASSURANCE William F. Webb

GFEIA Walter D. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/124

STATION GPE

GENERATOR TRANSFER OPERATION (See Para. 11)

Generator I

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>240</u>	<u>240</u>
Amperage	<u>84</u>	<u>87</u>
Wattage	<u>17,500</u>	<u>17,500</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 6 Seconds.

Generator II

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>240</u>	<u>240</u>
Amperage	<u>87</u>	<u>84</u>
Wattage	<u>17,500</u>	<u>17,500</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 7 Seconds.

DATE 11/19/63
TESTER Ed Maller
SUPERVISOR George C. Mc
QUALITY ASSURANCE William R. Webb
GEEIA Walter Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW DIESEL GENERATING SYSTEM

BRII/125

STATION GPE

PARALLELING TEST (See Para. 12)

Generator I (After Paralleling)

Amps	<u>34</u>	Amps
Watts	<u>7,000</u>	Watts
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>32</u>	Amps
Watts	<u>8,000</u>	Watts
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

DATE 11/19/63

TESTER Ed M. Allen

SUPERVISOR George E. Mc

QUALITY ASSURANCE William R. Ziff

GEEIA Charles R. Ray

PARAMVS

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET

BRH/121

20 KW POWER GENERATING SYSTEM

STATION TAD

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cps

A. Steady State Load

Minimum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 60 cps
Maximum Frequency 61 cps
Recovery Time 2 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency _____ cps~~
~~Maximum Frequency _____ cps~~
~~Recovery Time _____ Seconds~~

Generator II

Name Plate Frequency 60 cps

A. Steady State Load

Maximum Frequency Reading 60 cps
Maximum Frequency Reading 60 cps

B. Sudden Change - Full Load to No Load

Minimum Frequency 60 cps
Maximum Frequency 61 cps
Recovery Time 3 Seconds

~~C. Sudden Change - No Load to Full Load~~

~~Minimum Frequency _____ cps~~
~~Maximum Frequency _____ cps~~
~~Recovery Time _____ Seconds~~

DATE 27 NOV. 63

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEKIA [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/122

STATION TAD

PHASING (See Para. 8)

Generator I

Position I
Position II

121 Volts
238 Volts

Generator II

Position I
Position II

123 Volts
240 Volts

NEUTRAL GROUNDING (See Para. 9)

Generator I

Ground Rod to Neutral Terminal ZERO OHMS

Generator II

Ground Rod to Neutral Terminal ZERO OHMS

DATE 27 NOV., 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEETA

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATOR SYSTEM

BRH/123

STATION TAL TCO

TERMINAL VOLTAGE (See Para. 10)

Percent Voltage Drop $\frac{(\text{Generator Panelboard Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panelboard Voltage}}$

Single Phase 240 Volts

MRC-80

<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
<u>235</u>	<u>235</u>	<u>ZERO</u>

Single Phase 120 Volts

MRC-80
Line 1 to Neutral
Line 2 to Neutral

<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
<u>121</u>	<u>121</u>	<u>ZERO</u>
<u>121</u>	<u>121</u>	<u>ZERO</u>

DATE 27 NOV., 1963

TESTER David C. Miller

SUPERVISOR Levy V. Miller

QUALITY ASSURANCE W. L. Miller

GEBLA Walter L. Gray

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/124

STATION TAL TCO

GENERATOR TRANSFER OPERATION (See Para. 11)

Generator I

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>242</u>	<u>241</u>
Amperage	<u>84</u>	<u>82</u>
Wattage	<u>19.5 KW</u>	<u>16 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 5 Seconds.

Generator II

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>241</u>	<u>240</u>
Amperage	<u>82</u>	<u>81</u>
Wattage	<u>15.7 KW</u>	<u>19 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 7 Seconds.

DATE 27 NOV. 1963
TESTER *Robert E. Malt*
SUPERVISOR *James T. Miller*
QUALITY ASSURANCE *J. M. Malt*
GEMTA *Walter L. Craig*

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW DIESEL GENERATING SYSTEM

BRII/125

STATION PAL TCO

PARALLELING TEST (See Para. 12)

Generator I (After Paralleling)

Amps	<u>90</u>	Amps
Watts	<u>21.5 KW</u>	Watts
Volts	<u>239</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>82</u>	Amps
Watts	<u>19 KW</u>	Watts
Volts	<u>238</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

DATE 27 NOV. 1963

TESTER *[Signature]*

SUPERVISOR *[Signature]*

QUALITY ASSURANCE *[Signature]*

GEKIA *Walter Craig*

FEDERAL ELECTRIC CORPORATION

BR11/121

BIG RALLY II PROJECT

DATA SHEET

20 KW POWER GENERATING SYSTEM

STATION TES

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cpsA. Steady State LoadMinimum Frequency Reading
Maximum Frequency Reading60 cps
60 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency
Maximum Frequency
Recovery Time60 cps
61 cps
3 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency
Maximum Frequency
Recovery Time~~~~cps
 cps
 Seconds~~

Generator II

Name Plate Frequency 60 cpsA. Steady State LoadMaximum Frequency Reading
Maximum Frequency Reading60 cps
60 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency
Maximum Frequency
Recovery Time60 cps
61 cps
3 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency
Maximum Frequency
Recovery Time~~~~cps
 cps
 Seconds~~DATE 29 NOV. 63

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEELA

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FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/122

STATION TES

PHASING (See Para. 8)

Generator I

Position I 120 Volts
Position II 240 Volts

Generator II

Position I 117 Volts
Position II 238 Volts

NEUTRAL GROUNDING (See Para. 9)

Generator I

Ground Rod to Neutral Terminal ZERO OHMS

Generator II

Ground Rod to Neutral Terminal ZERO OHMS

DATE 29 NOV. 1963

TESTER D. C. Mohr

SUPERVISOR R. C. Mohr

QUALITY ASSURANCE J. H. Humpster

GEELA Walter L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATOR SYSTEM

BRH/123

STATION TES

TERMINAL VOLTAGE (See Para. 10)

Percent Voltage Drop $\frac{(\text{Generator Panelboard Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panelboard Voltage}}$

Single Phase 240 Volts

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
MRC-80	<u>236</u>	<u>235</u>	<u>1 V</u>

Single Phase 120 Volts

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
MRC-80	<u>120</u>	<u>119</u>	<u>1 V</u>
Line 1 to Neutral	<u>120</u>	<u>119</u>	<u>1 V</u>
Line 2 to Neutral			

DATE 29 NOV. 1963

TESTER Robert C. Mohr

SUPERVISOR R. C. Edwards

QUALITY ASSURANCE J. M. Peters

GEELA Walter L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/124

STATION TES

GENERATOR TRANSFER OPERATION (See Para. 11)

Generator I

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>240</u>	<u>238</u>
Amperage	<u>93</u>	<u>98</u>
Wattage	<u>20 KW</u>	<u>21 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 5 Seconds.

Generator II

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>238</u>	<u>240</u>
Amperage	<u>93</u>	<u>96</u>
Wattage	<u>19.5 KW</u>	<u>19.5 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 4 Seconds.

DATE 29 NOV. 1963
TESTER Robert C. Moore
SUPERVISOR Robert Moore
QUALITY ASSURANCE J. M. Peters
GECIA Walter L. Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW DIESEL GENERATING SYSTEM

BRH/125

STATION TES

PARALLELING TEST (See Para. 12)

Generator I (After Paralleling)

Amps	<u>117</u>	Amps
Watts	<u>21 KW</u>	Watts
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>124</u>	Amps
Watts	<u>26 KW</u>	Watts
Volts	<u>235</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

DATE 29 NOV. 1963

TESTER D. C. M. S.

SUPERVISOR A. C. M. S.

QUALITY ASSURANCE A. C. M. S.

GEEIA

Walter L. Craig

FEDERAL ELECTRIC CORPORATION

BRH/121

BIG RALLY II PROJECT

DATA SHEET

20 KW POWER GENERATING SYSTEM

STATION TRA

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cpsA. Steady State LoadMinimum Frequency Reading 59 cpsMaximum Frequency Reading 61 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency 60 cpsMaximum Frequency 62 cpsRecovery Time 3 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency~~ ~~_____~~ cps~~Maximum Frequency~~ ~~_____~~ cps~~Recovery Time~~ ~~_____~~ Seconds

Generator II

Name Plate Frequency 60 cpsA. Steady State LoadMaximum Frequency Reading 59 cpsMaximum Frequency Reading 61 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency 60 cpsMaximum Frequency 62 cpsRecovery Time 3 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency~~ ~~_____~~ cps~~Maximum Frequency~~ ~~_____~~ cps~~Recovery Time~~ ~~_____~~ SecondsDATE 22 OCTOBER 1963TESTER [Signature]SUPERVISOR [Signature]QUALITY ASSURANCE [Signature]GEBIA [Signature]

9-61

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/122

STATION TKA

PHASING (See Para. 8)

Generator I

Position I
Position II

240 Volts
120 Volts

Generator II

Position I
Position II

240 Volts
120 Volts

NEUTRAL GROUNDING (See Para. 9)

Generator I

Ground Rod to Neutral Terminal ZERO OHMS

Generator II

Ground Rod to Neutral Terminal ZERO OHMS

DATE 22 OCTOBER, 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GEEIA [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATOR SYSTEM

BRH/123

STATION TKA

TERMINAL VOLTAGE (See Para. 10)

Percent Voltage Drop $\frac{(\text{Generator Panelboard Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panelboard Voltage}}$

Single Phase 240 Volts

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
XXXXXX LOS XXXXXX	<u>240</u>	<u>240</u>	<u>ZERO</u>

Single Phase 120 Volts

MRC-80
Line 1 to Neutral
Line 2 to Neutral

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
	<u>117</u>	<u>117</u>	<u>ZERO</u>
	<u>117</u>	<u>117</u>	<u>ZERO</u>

DATE 22 OCTOBER, 1963

TESTER [Signature]

SUPERVISOR [Signature]

QUALITY ASSURANCE [Signature]

GKELA [Signature]

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRII/124

STATION TRA

GENERATOR TRANSFER OPERATION (See Para. 11)

Generator I

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>210</u>	<u>210</u>
Amperage	<u>90</u>	<u>93</u>
Wattage	<u>19.5 KW</u>	<u>19.5 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 5 Seconds.

Generator II

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>210</u>	<u>210</u>
Amperage	<u>94</u>	<u>95</u>
Wattage	<u>19.5 KW</u>	<u>19.5 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 7 Seconds.

DATE 22 OCTOBER, 1963
TESTER J. W. Shuler
SUPERVISOR Raymond C. L. Linn
QUALITY ASSURANCE J. M. Thompson
GEBIA Walter Craig

FEDERAL ELECTRIC CORPORATION

BRII/125

BIG RALLY II PROJECT

DATA SHEET

20 KW DIESEL GENERATING SYSTEM

STATION TKA

PARALLELING TEST (See Para. 12)

Generator I (After Paralleling)

Amps	<u>93</u>	Amps
Watts	<u>19.5 KW</u>	Watts
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

Generator II (After Paralleling)

Amps	<u>90</u>	Amps
Watts	<u>19.5 KW</u>	Watts
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading	_____	RPM

DATE 22 OCTOBER, 1963

TESTER

SUPERVISOR

QUALITY ASSURANCE

GEEIAM

FEDERAL ELECTRIC CORPORATION

BRH/121

BIG RALLY II PROJECT

DATA SHEET

20 KW POWER GENERATING SYSTEM

STATION TIZ

FREQUENCY (See Para. 7)

Generator I

Name Plate Frequency 60 cpsA. Steady State LoadMinimum Frequency Reading 60 cps
Maximum Frequency Reading 60 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency 59 cps
Maximum Frequency 60 cps
Recovery Time 2 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency _____ cps~~
~~Maximum Frequency _____ cps~~
~~Recovery Time _____ Seconds~~

Generator II

Name Plate Frequency 60 cpsA. Steady State LoadMaximum Frequency Reading 60 cps
Maximum Frequency Reading 60 cpsB. Sudden Change - Full Load to No LoadMinimum Frequency 59 cps
Maximum Frequency 60 cps
Recovery Time 2 Seconds~~C. Sudden Change - No Load to Full Load~~~~Minimum Frequency _____ cps~~
~~Maximum Frequency _____ cps~~
~~Recovery Time _____ Seconds~~DATE 26 OCTOBER, 1963TESTER S. E. MohrSUPERVISOR Rand L. JacobsQUALITY ASSURANCE William J. BelsGEEIA Walter Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRH/122

STATION TIZ

PHASING (See Para. 8)

Generator I

Position I	<u>240</u>	Volts
Position II	<u>120</u>	Volts

Generator II

Position I	<u>240</u>	Volts
Position II	<u>120</u>	Volts

NEUTRAL GROUNDING (See Para. 9)

Generator I

Ground Rod to Neutral Terminal ZERO OHMS

Generator II

Ground Rod to Neutral Terminal ZERO OHMS

DATE 26 OCTOBER, 1963
TESTER J. E. Mohr
SUPERVISOR Paul J. [unclear]
QUALITY ASSURANCE W. H. [unclear]
GEEIA Walter [unclear]

9-67

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATOR SYSTEM

BRH/123

STATION TIZ

TERMINAL VOLTAGE (See Para. 10)

Percent Voltage Drop $\frac{(\text{Generator Panelboard Voltage} - \text{Terminal Voltage}) \times 100\%}{\text{Generator Panelboard Voltage}}$

Single Phase 240 Volts

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
MRC-80 LOS	<u>240</u>	<u>240</u>	<u>0%</u>

Single Phase 120 Volts

	<u>Generator Panelboard Volt.</u>	<u>Term. Volts</u>	<u>% Volt Drop</u>
MRC-80X LOS	<u>117</u>	<u>117</u>	<u>0%</u>
Line 1 to Neutral	<u>117</u>	<u>117</u>	<u>0%</u>
Line 2 to Neutral	<u>117</u>	<u>117</u>	<u>0%</u>

DATE 26 OCTOBER, 1963

TESTER J. E. Malt

SUPERVISOR Paul J. Janssen

QUALITY ASSURANCE W. M. Kimpke

GEETA Arthur Craig

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW POWER GENERATING SYSTEM

BRH/124

STATION TI-2

GENERATOR TRANSFER OPERATION (See Para. 11)

Generator I

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>240</u>	<u>241</u>
Amperage	<u>78</u>	<u>80</u>
Wattage	<u>16 KW</u>	<u>16KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 7 Seconds.

Generator II

	Normal Operation Conditions	Conditions New Duty Unit After Transfer
Voltage	<u>240</u>	<u>240</u>
Amperage	<u>77</u>	<u>80</u>
Wattage	<u>16 KW</u>	<u>16 KW</u>
Frequency	<u>60</u>	<u>60</u>

Time in Seconds to Effect Transfer 5 Seconds.

DATE 26 OCTOBER, 1963
TESTER E. C. Mohr
SUPERVISOR Paul L. Lamm
QUALITY ASSURANCE W. M. Lamm
GEEIA Walter Cray

FEDERAL ELECTRIC CORPORATION
BIG RALLY II PROJECT
DATA SHEET
20 KW DIESEL GENERATING SYSTEM

BRII/125

STATION TIZ

PARALLELING TEST (See Para. 12)

Generator I (After Paralleling)

Amps	<u>45</u>	Amps
Watts	<u>10.5</u>	Watts KW
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading		RPM

Generator II (After Paralleling)

Amps	<u>45</u>	Amps
Watts	<u>10.5</u>	Watts KW
Volts	<u>240</u>	Volts
Frequency	<u>60</u>	cps
Tachometer Reading		RPM

DATE 26 OCTOBER, 1963

TESTER S. C. Meibert

SUPERVISOR Paul J. Lorsch

QUALITY ASSURANCE J. M. Mainpette

GEETA Walter Craig

FEDERAL ELECTRIC CORPORATION
486L PROJECT
DATA SHEET
PU-286/G GENERATOR SET

STATION GAR
GENERATOR SER # 1-118811 *ack* 1189962 TC.

	<u>EXPECTED</u>	<u>ACTUAL</u>	
7.2.B OIL PRESSURE	15 to 20 psi	<u>20</u>	
7.2.C FREQUENCY	59 to 61 cps	<u>59.5</u>	
7.2.D AMMETER	NOT 52 amps	<u>19</u>	
7.2.D VOLTMETER	118 to 122 amps	<u>126</u>	
7.2.E MULTIMETER READING	118 to 122 VAC	<u>121V</u>	
7.2.F BATTERY CHARGE RATE	NOT 6.3 amps	<u>4.5</u>	
7.2.G OIL LOW-PRESSURE SHUT-OFF	Cut-off approx. 6 psi	<u>Manual-RSK</u>	<u>Initial</u>
7.2.H LOW WATER SHUT-OFF	Cut-off approx. 2 min.	<u>Manual-RSK</u>	<u>Initial</u>
7.2.I VOLTAGE REGULATOR	NLT 115 to 125V swing	<u>80-148</u>	
7.2.J FIELD RHEOSTAT	NLT 115 to 125V swing	<u>100-140</u>	

DATE 17 January 1964
TESTER *Henry Hall*
SUPERVISOR *F. H. [unclear]*
QUALITY ASSURANCE *M. [unclear]*
GEEIA *Ralph S. [unclear]*

FEDERAL ELECTRIC CORPORATION
486L PROJECT
DATE SHEET
PU-286/G GENERATOR SET

STATION _____ GAR _____
GENERATOR SER # 2-1189962 ^{24K} 11884657C

	EXPECTED	ACTUAL	
7.2.B OIL PRESSURE	15 to 20 psi	<u>13</u>	
7.2.C FREQUENCY	59 to 61 cps	Broken meter	
7.2.D AMMETER	NOT 52 amps	20	
7.2.D VOLTMETER	118 to 122 amps	122X	
7.2.E MULTIMETER READING	118 to 122 VAC	122V	
7.2.F BATTERY CHARGE RATE	NOT 6.3 amps	0	
7.2.G OIL LOW-PRESSURE SHUT-OFF	Cut-off approx. 6 psi	Manual-RSK	Initial
7.2.H LOW WATER SHUT-OFF	Cut-off approx. 2 min.	Manual-RSK	Initial
7.2.I VOLTAGE REGULATOR	NLT 115 to 125V swing	100-140	
7.2.J FIELD RHEOSTAT	NLT 115 to 125V swing	100-140	

DATE 17 January 1964
TESTER [Signature]
SUPERVISOR [Signature]
QUALITY ASSURANCE [Signature]
GEEIA Ralph L. Kruger

FEDERAL ELECTRIC CORPORATION
CABLE TEST RESULTS

SITE TKR
21 OCTOBER 1963

PAIR NO.	DC INSUL.	LOOP RES. in OHMS	MURRAY TIP RING	AUDIO LOSS 1000 cps 5000 cps
1	INF.	48	32 Ohms 32 OHMS	
2	INF.	48	32 Ohms 32 OHMS	0.75db 3.2db
3	"	49	32.5 " 32.0 "	
4	"	49	32.0 " 32.0 "	0.75db 3.2db
5	"	49	32.0 " 32.5 "	
6	"	49	32.0 " 32.0 "	0.75db 3.2db
7	"	49	32.5 " 32.5 "	
8	"	48	32.0 " 32.0 "	0.75db 3.2db
9	"	49	32.0 " 32.5 "	
10	"	48	32.0 " 32.5 "	0.75db 3.2db
11	"	49	32.5 " 32.5 "	
12	"	48	32.5 " 32.0 "	0.75db 3.2db
13	"	48	32.0 " 32.0 "	
14	"	48	32.5 " 32.0 "	0.75db 3.2db
15	"	48	32.0 " 32.5 "	
16	"	49	32.5 " 33.0 "	0.75db 3.2db
17	"	48	32.5 " 32.5 "	
18	"	50	32.5 " 33.0 "	0.75db 3.2db
19	"	49	32.5 " 32.5 "	
20	"	49	32.5 " 33.0 "	0.75db 3.2db
21	"	48	32.5 " 32.5 "	
22	"	48	32.5 " 32.5 "	0.75db 3.2db
23	"	48	32.5 " 32.5 "	
24	"	49	32.5 " 32.5 "	0.75db 3.2db
25	"	48	32.0 " 32.5 "	
26	"	48	32.5 " 32.0 "	0.75db 3.2db
27	"	48	32.5 " 32.5 "	
28	"	48	32.5 " 32.5 "	0.75db 3.2db
29	"	48	33.0 " 32.5 "	
30	"	48	32.5 " 33.0 "	0.75db 3.2db
31	"	48	32.5 " 32.5 "	
32	"	48	32.5 " 32.5 "	0.75db 3.2db
v33	"	49	32.5 " 33.0 "	
34	"	48	32.5 " 32.5 "	0.75db 3.2db
35	"	48	32.5 " 32.5 "	
36	"	49	32.5 " 32.0 "	0.75db 3.2db
37	"	48	32.5 " 32.0 "	
38	"	49	32.5 " 32.5 "	0.75db 3.2db
39	"	49	32.5 " 32.0 "	
40	"	48	32.5 " 32.5 "	0.75db 3.2db

PAIR NO.	DC INSUL	LOOP RES. in OHMS	MURRAY TEST in OHMS		AUDIO LOSS	
			TIP	RING	1000cps	5000cps
41	INF.	48	32.5	33.0	0.75db	3.2db
42	"	48	32.0	32.5	0.75db	3.2db
43	"	49	32.5	33.0	0.75db	3.2db
44	"	50	32.5	33.0	0.75db	3.2db
45	"	50	32.5	33.0	0.75db	3.2db
46	"	49	32.5	32.5	0.75db	3.2db
47	"	49	32.5	32.5	0.75db	3.2db
48	"	49	32.5	32.5	0.75db	3.2db
49	"	49	32.5	32.5	0.75db	3.2db
50	"	48	32.0	32.5	0.75db	3.2db

CABLE LENGTH 3200 FT.

CABLE SIZE 19 GAUGE DIRECT BURIAL

MURRAY TEST: EACH WIRE RESISTANCE TO GROUND

DC INSULATION: LOOP TO GROUND

DC LOOP RESISTANCE: RESISTANCE OF LOOP FROM TKR TO TERMINAL

AUDIO: ALL LOOP BASIS, i.e. PAIR 3 to 4 MEASURED AT TKR. THEREFORE
ALL MEASUREMENTS ARE ONE HALF TOTAL ON ONE WAY MEASUREMENT.

X-TALK: BETTER THAN -80db SIDE TO SIDE ON LOOP BASIS.

DATE 22 Oct. 1963

TESTER _____

SUPERVISOR

Raymond K. L. Luan

QUALITY ASSURANCE

Stan Randall

GEEIA

Charles E. Barrentone

SHEET 2 of 2

10-2

FEDERAL ELECTRIC CORPORATION

TID

BIG RALLY II PROJECT
DATA SHEET
HOT AND COLD WATER PIPE TESTS

		ACTUAL	
HOT WATER TRANSITE	EXPECTED PSI <u>15</u>	PSI. <u>60</u>	Int
COLD WATER TRANSITE	EXPECTED PSI <u>50</u>	PSI. <u>150</u>	Int.
HOT WATER CASING	EXPECTED PSI <u>15</u>	PSI <u>15</u>	Int.

DATE 11/20/63

TESTER K. K. K.

SUPERVISOR Russell S. Carter

QUALITY ASSURANCE Arthur J. Hunt

DOCUMENT CONTROL DATA - R&D

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L.G. Hanscom Field, Bedford, Mass.

13. ABSTRACT

Test Procedures for MC-50 Multiplex

14.

KEY WORDS

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